REPORT RESUMES

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A BIBLIOGRAPHY OF PUBLISHED AND UNPUBLISHED VOCATIONAL AND TECHNICAL EDUCATION LITERATURE.

CORPLAN ASSOCIATES, CHICAGO, ILL.
ILLINOIS RESEARCH AND DEVELOPMENT COORD. UNIT

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CITATIONS FOR PART ONE WERE OBTAINED FROM ABSTRACTING JOURNALS IN EDUCATION, APPLIED SCIENCE AND TECHNOLOGY, DISSERTATION ABSTRACTS, CURRENT PERIODICALS, AND LISTS OF RESEARCH PROJECTS REVIEWED IN RESPONSE TO REQUESTS TO STATE AND CITY BOARDS OF EDUCATION AND SELECTED COLLEGES AND UNIVERSITIES. THE 1,516 REFERENCES ARE ARRANGED ALPHABETICALLY BY AUTHOR AND WERE GENERALLY PUBLISHED FROM 1960-65. ANNOTATIONS ARE INCLUDED WHERE THEY WERE AVAILABLE. PART TWO CONTAINS APPROXIMATELY 300 REFERENCES TO UNPUBLISHED RESEARCH PROJECTS, COMPLETED OR IN PROGRESS, FUNDED BY STATE RESEARCH GRANTS OR BY THE U.S. OFFICE OF EDUCATION. A SUBJECT AND KEY-WORD INDEX WITH PARTIAL CROSS-INDEXING AND TOPICS OF GENERAL INTEREST REFERS TO THE CITATION NUMBERS. (PS)

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CORPLAN ASSOCIATES
of
IIT Research Institute
10 West 35th Street
Chicago, Illinois 60616

Corplan Associates Project Q-6024

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INTRODUCTION

This bibliography has been prepared by Corplan Associates, an affiliate of IIT Research Institute (formerly Armour Research Foundation), for the Research Coordinating Unit (RCU) of the Vocational and Technical Education Division of the State of Illinois Board of Vocational Education and Rehabilitation. The RCU authorized the bibliography as part of a study subcontracted under a general contract (O.E.-5-85-126) with the U.S. Office of Education. It is intended to be helpful to those concerned with education in Illinois at the state and local level and to those in institutions of higher education who are seeking literature in the field as a basis for further research or for solutions to present problems in vocational and technical education.

The citations include those developed during a literature search and during personal interviews conducted as part of a study entitled "A Survey of Information on Vocational and Technical Education in the State of Illinois" being conducted for the RCU. The purpose of the survey is to develop occupational data related to the impact of technological change on occupational skill requirements and to develop information relevant to major problems facing Illinois vocational and technical education. This information should be helpful in planning and developing programs in the state. The bibliography is oriented to this purpose and is not meant to be exhaustive.

METHODOLOGY

Citations were obtained from abstracting journals (including the education and applied science and technology indices), dissertation abstracts, current periodicals, and research project list requests sent to state and city boards of education and selected colleges and universities. The period searched covered the last three to four years.

Nearly 100 references refer to specialized bibliographies on key subjects, including those available through the U.S. Department of Labor and other agencies. Thus the user is given access to additional data and information. Annotations from abstracting journals and other references are included. Of special interest are the annotations taken from abstracts of dissertation microfilms available through University Microfilms, Ann Arbor, Michigan.

Part II contains approximately 300 references to unpublished research projects, completed or in progress, funded by state research grants or by the U.S. Office of Education under Section (4C) of the Vocational Education Act of 1963.

INDEXING

A subject and key-word index with partial cross-indexing is provided. Each subject or key word is followed by a series of numbers referring to the specific citations in that category. Where appropriate, subindex categories are also provided. Index titles were selected to correspond with the survey. However, topics of general interest are also indexed. The index titles are similar to but probably do not conform to other key-word indices, particularly those of the Education Research Information Center (ERIC).

ACKNOWLEDGMENTS

Corplan Associates acknowledges the work of the Technical Information Research group of IIT Research Institute who conducted the literature search, processed the data, and indexed the data-processing cards. Corplan also wishes to acknowledge the assistance of the many educators, businessmen, school administrators, and government officials who contributed reference materials.

A special debt of gratitude is owed to project steering committee members, Messrs. V. E. Burgener and George Fuka of the RCU and Mr. Alan Brimm of the Illinois State Employment Service.

PART - I

PUBLISHED AND GENERALLY AVAILABLE CITATIONS

A BIBLIOGRAPHY OF PUBLISHED AND UNPUBLISHED VOCATIONAL AND TECHNICAL EDUCATION LITERATURE

1. Abrams, A. J., "A Further Evaluation of a Programmed Text on the Use of the Multimeter USN Personnel Research Activity," Tech. Bull., 65-12, 18 pp

   A programmed text on the AN/PSM-4 Multimeter was developed for use in Navy electronic courses. A study revealed that subjects trained with the program performed better than subjects who received the usual lecture-demonstration training; that, however, the desired level of performance was not achieved and that subjects became fatigued while working on the program. To correct these deficiencies a later study added practical materials to the programmed text which was presented under 2 training conditions. Of 28 male college students 14 were given 10 hours of instruction during 2 days and 14 received 10 hours of instruction during 4 days. The results reveal a higher level of performance, but mastery was not yet attained; subjects trained under both conditions performed similarly; subjects trained under the 4-day conditions reported greater satisfaction.

2. Adams, W. L., "Apprenticeship Training for Paper Machine Crews," Paper Industry, August 1964, 46:383-5

3. Albertin, "Anticipating Changes in Vocational Education," School and Community, November 1964, 51:22

4. Albright, L. E., J. R. Glennon, and W. J. Smith, The Use of Psychological Tests in Industry, Cleveland, O., Howard Allen, 1963, 196 pp., $4.25

   A concise manual is addressed to students, personnel workers, and "the academician seeking to ground his students in application." Theoretical and practical aspects of criteria, validity, statistics, and commonly used tests are presented. Appendixes on test administration, sources of tests, computer programs, advice on test programs, statistical tables are included.

5. Alexander-Frutschi, M. (Ed.) (International Development Center, Stanford Research Institute) Human Resources and Economic Growth, Menlo Park, Calif., Stanford Research Institute, 1963, 398 pp.

   This is an international annotated bibliography on the role of education and training in economic and social development.

6. Al-Salman, M. H. (Cornell U.) "The Role of Prevocational Agriculture in the Junior High Schools of New York State," Cornell U., 1965, 143 pp.
Order U. Microfilms no. 65-6982, Ann Arbor, Mich.

   This study aims to provide a description of prevocational agriculture offered in the various junior high schools in New York State and to determine what selected educators in agriculture believe the objectives and course content should be.

7. Alterman, J., "Interindustry Employment Requirements," Monthly Labor Review, July 1965, 88:841-50

   This article includes input-output tables.

8. Amberson, M., "Job Opportunities in Montana Hardware and Farm Implement Businesses, Ag Ed Mag, January 1965, 37:168

9. Amer. Council on Industrial Arts Teacher Ed., "Approaches and Procedures in Industrial Arts," Fourteenth Yearbook, McKnight, 1965, 143 pp.

10. Am. Educational Res. Assn., "Adult Education," Rev. Ed. Res. June 1965, 35:165-245

   This article reviews the literature for the 6-year period since June 1959.

11. Am. Management Assn., Personnel Div., New York, "Programmed Instruction in Industry," AMA Management Bull., 1962, 22, 43 pp.

12. Am. Soc. of Training Directors

   Selected bibliographies covering 32 training subjects, 17th and 18th Annual Conferences of the Am. Soc. of Training Directors, Training Trading Post Sessions, Dallas, Texas, 1962. Am. Soc. of Training Directors Conference Comm., 1962, 89 pp.

13. Am. Vocational Assoc., "Developing Educational Specifications for Vocational and Practical Arts Facilities," Am. Vocational Assoc., 1959, 48 pp.

14. Amidon, E. P., "Home Economics in Vocational Education," Am. Voc. J, May 1965, 40:18-20

15. Anderson, A. V., "Training Utilization, and Proficiency of Navy Electronics Technicians: VII, an Overview," USN, Bureau of Naval Personnel, Tech. Bull., 1963, 63-4, 13 pp.

This summarizes some of the important aspects of the previous 6 reports. "Earlier reports in the series should be consulted for more detailed survey results."

16. Anderson, D. N. (Univ. of Minn.) "An Experimental Evaluation of Two Methods for Developing Creative Problem Solving Abilities in an Industrial Arts Course," Univ. of Minn., 1963, 198 pp.
Order U. Microfilms no. 63-7903, Ann Arbor, Mich.

17. Andrews, M. E., "City Surveys Its Students' Christmas Selling Experience," Business Ed. Forum, May 1965, 19:24-5

18. Anthony, D. M. (U. of Texas) "The Relationship of Certain Socioeconomic and Academic Factors to Student Choice of Occupation and Program in the Public Junior College," U. of Tex., 1964, 255 pp.
Order U. Microfilms no. 64-11,772, Ann Arbor, Mich.

This study undertakes to compare students in college transfer programs with those in terminal programs in public junior colleges with respect to the following factors: occupational choice, socioeconomic level, social mobility, aspiration, degree of parental influence in the selection of an occupation, emphasis on social status and prestige in the selection of an occupation, high school background, rank in high school graduating class, and score on college entrance examinations.

19. Arco Editorial Board, Laboratory Aide (The Arco text for Job and Test Training) New York, Arco Publishing Co., 1963

20. Area Redevelopment Administration, "Impact of Technological Change upon Communities and Public Policy," Prepared for the Industrial Relations Research Association publication Adjustments to Technological Change, 23 pp.
Order ARA

Discusses some social implications of unemployment caused by rapid technological change. Tells how technological change particularly affects young, older, and nonwhite workers. Explains its special impact on geographical areas and describes how community, state, and federal government programs attempt to solve attendant problems.

21. Arel, D., "Secretary Turns Teacher," Business Education World, February 1965, 45:20-1

22. The Arizona Occupational Outlook Handbook, Part I, 1963, 201 pp., Part II, 1964, 214 pp., Arizona State Employment Service, Phoenix, Ariz.

Part I provides counselors and youths with information on the content of occupations and fields of work in Arizona. It covers more than 90 occupations open to youths who plan to terminate their education at the high school or junior college level. Part II presents similar information for about 90 additional occupations, including many that require a college degree, and discusses technological change and its effect on employment in several of the state's industries. Both parts furnish information on training, wages, lines of entry and advancement, and employment outlook for the various occupations.

23. Armed Services Tech. Info. Agency, Arlington, Va., Teaching Machines: A Report Bibliography, ASTIA, 1962, 49 pp.

The bibliography contains sections on ASTIA documents, books, dissertations, patents, periodicals, and research grants.

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25. Arnold, J. P. (U. of Ill.) "Technical Education Curricular Recommendations by Management Representatives of Manufacturing Establishments in Illinois," U. of Ill., 1965, 134 pp.
Order U. Microfilms no. 65-7065, Ann Arbor, Mich.

This thesis studies whether a group of technically qualified management personnel of manufacturing establishments which employ technicians will exhibit more general views toward post high school technical curricula than will technicians themselves. The author found no significant difference of views between those expressed by management personnel and those expressed by technicians.

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28. Arnold, W. M., "Changing Patterns in Vocational Education," Education, December 1964, 85:206-10

29. Arnold, W. M., "Developing a Total, Balanced Program of Vocational and Technical Education," National Association of Secondary School Principals Bull., May 1965, 49:142-53

30. Arnold, W. M., "Vocational Education: Its Role Today," Theory into Practice, December 1964, 3:163-6

31. Arnold, W. M., "Vocational Education and Industrial Training: Partners in the World of Work," Training Directors' J., Vol. 19, no. 6, pp. 4-9, June 1965

32. Arnstein, G. E., "Automation: The New Industrial Revolution," J Industrial Arts Education, January 1964, 23:33-6

33. Arnstein, G. E., "Vocational Education," National Association of Secondary School Principals Bull., November 1964, 48:56-72

34. Arnstein, G. E., "Impact of Automation on Occupational Patterns," National Business Education Yearbook, 1964, 2:39-50

35. Arnstein, G. E., "Technological Context of Vocational Education," National Soc. Study Ed. Yearbook, 64 pt 1:39-63, 1965

36. Arrants, W., "Develop Constructive Apprentice Program," Elec. World, November 16, 1964, 162:142

37. Arthur, R., "What Industry Expects of Youth," American Vocational J, April 1965, 40:18-20

38. Ash, L. C., "Trade and Industrial Education; an Effective Program," Education, December 1964, 85:211-16

39. Ash, L. C., "Cooperation Between Vocational Education and Other Federal Programs," National Association of Secondary School Principals Bull., May 1965, 49:24-37

40. Atomic Energy Commission, Div. of Tech. Info. "Careers in Atomic Energy," 1963, 27 pp.
Order AEC

Describes careers in science that deal with the atom. Discusses college scholarships and other financial assistance, and location of jobs. Includes bibliography of sources of financial aid and career materials relating to atomic energy.

41. Atteberry, P. H., "Industrial Arts in the Junior High School," School Shop, December 1964, 24:17-18

42. Auman, F. A. (Philadelphia Gas Works) "Retraining: How Much of an Answer to Technological Unemployment?" Personnel J., 1962, Vol. 41, no. 10, pp. 505-7

The results of both private and public retraining programs have been disappointing. In the Armour and Company study, only 13% of 433 employees were successfully retrained after their jobs were eliminated. In Bridgeport, Connecticut, the government was successful in retraining only 2% of the more than 400 unemployed, semiskilled workers they considered for training for other available semiskilled jobs. Many (28% of the Armour group and 61% of the Connecticut group) were not sufficiently motivated to participate in the selection process. Among the deterrents to entering retraining were unemployment benefits and home ownership which reduced willingness to relocate. Only a little more than one-third of each group who were tested met the minimum requirements for the training. The chief problem seems to be that "we are eliminating the 80 IQ jobs but haven't determined what to do with the 80 IQ jobless."

43. Babcock, R. J. (Cornell Univ.) "An Analysis of Selected Guidance Programs for Students Who Seek Employment Immediately After High School," Cornell U., 1963, 172 pp. Order U. Microfilms no. 64-3719, Ann Arbor, Mich.

44. Bachman, W. A., "Teachers Sent to School at Delaware City Refinery," Oil & Gas J., January 11, 1965, 63:96-7

45. Baer, F. A., "What Superintendents Can Do To Improve Industrial Arts," J. Industrial Arts Education, January 1965, 24:22

46. Baer, M. F., "Job Mobility," Personnel and Guidance J., December 1963, 42:340-1

47. Baer, M. F. and E. C. Roeber, "Occupational Information: The Dynamics of Its Nature and Use," Science Research Associates, 1964

48. Bailey, J. K. (Ohio State Univ.) "Non-Farm Agricultural Employment in West Virginia, with Implications for Vocational Education Programs," Ohio State Univ., 1964, 214 pp. Order U. Microfilms no. 65-5613, Ann Arbor, Mich.

This study was undertaken to appraise the non-farm agricultural employment in West Virginia and provide a basis for projecting agricultural education programs to serve this sector of the labor force.

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52. Barber, M. M., "Cooperative Teaching Between the Business Community and the School," J. Business Education, January 1965, 40:149-50

53. Barlow, M. L., "Ideas You Can Put to Work To Shorten the Image Gap," American Vocational J., May 1965, 40:47

54. Barlow, M. L., "Curriculum Development and the Improvement of Instruction," National Association of Secondary School Principals Bull., May 1965, 49:124-32

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56. Barlow, M. L., "Platform for Vocational Education in the Future," National Soc. Study Ed. Yearbook 64 pt 1:280-91, 1965

57. Barlow, M. L., "Principles of Trade and Industrial Education," (1st edn.) Univ. of Texas, Div. of Extension, Industrial Ed. Dept., Austin, Texas, 1963, 58 pp.

58. Barlow, M. L. and W. J. Schill, The Role of Mathematics in Electrical-Electronic Technology, Los Angeles, Univ. of Calif., Div. of Vocational Ed., 1962

59. Barnard, D. P., "Sources of Audio-Visual Materials for Industrial Education," Industrial Arts & Vocational Education, February 1965, 54:52

60. Barrington, B., "Science Teachers and Vocational Guidance," Science Education, October 1965, 49:395-6

61. Barry, R. and B. Wolf, Epitaph of Vocational Guidance, Columbia Univ., Teachers College, Bureau of Publications, New York, 1962

62. Bartel, C. and J. J. Littrell, "Occupational Emphasis for Industrial Arts," J. Industrial Arts Education, January 1965, 24:28-30

63. Bass, B. C., "Virginia Study Reveals Need for New Type of Vocational Training," Agricultural Education Magazine, March 1965, 37:229

64. Batchelder, A. B., "Occupational and Geographic Mobility: Two Ohio Area Case Studies," Industrial and Labor Relations Review, July 1965, 18:570-83

65. Bateman, B. (Univ. of Okla.) "An Instrument for the Evaluation of Understandings of Business Teaching," U. of Okla., 1963, 103 pp.
Order U. Microfilms no. 64-170, Ann Arbor, Mich.

The problem of this study was to develop an evaluative instrument to be used in the professional phase of business teacher preparation and to determine its validity and reliability. The instrument was designed to measure the extent of knowledge and understanding of the professional elements of teaching possessed by prospective business teachers.

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Order U. Microfilms no. 62-3396, Ann Arbor, Mich.

67. Baugh, D. F., "Multiple-Outlets for Stenographic Instruction: Problems," J. Business Education, February 1965, 40:193

68. Baum, R., "Serious Shortage of Well Qualified Laboratory Technicians," Industrial Photography, June 1965, 14:6

69. Bearden, H. D., Survey of Technical Occupations, Texas A. and M. College, Div. of Engineering Extension, 1959

70. Beaumont, J. A., "Distributive Education," Education, December 1964, 85:221-7

71. Beecham, B., "Let's Teach Basic Business Successfully!" Business Education Forum, November 1965, 20:20

72. Beery, J. R. (U. of Miami) "Does Professional Preparation Make a Difference?" J. of Teacher Education, 1962, Vol. 13 no. 4, 386-95

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73. Behman, S., "Labor Mobility, Increasing Labor Demand, and Money Wage-Rate Increases in U.S. Manufacturing," Rev. of Economic Studies, October 1964, Vol. 31, No. 88, pp. 253-66

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76. Bekker, J. A., "Industrial Skills and Automation," Automation, May 1963, 10:56-60

77. Belbin, E. and W. Shimmin (U. Coll., London) "Training the Middle Aged for Inspection Work," Occupational Psychology, 1964, Vol. 38, No. 1, pp. 49-57

Three training methods were employed among 40 semiskilled adults engaged for 75 minutes in "sorting items into 4 bins." The findings favor older operatives trained by a "discrimination method."

78. Belbin, R. M., "Training Methods for Older Workers," OCDE, Paris, France, 1965, 72 pp. $2.00

A report of the methods of job redesign for removing the stresses and strains of jobs which are harmful to and interfere with the extended employment of older workers in industry, thereby assuring them a longer highly productive work life span and increasing their availability as a reserve of efficient employees.

79. Bell, C. L. (U. of Missouri) "Status of and Need for Industrial Arts in the Public Schools of Kansas with Implications for Teacher Education," U. of Missouri, 1964, 318 pp.
Order U. Microfilms no. 64-13,282, Ann Arbor, Mich.

This study analyzes scope, content, and emphasis of industrial arts education in Kansas public schools and reviews the teacher education in industrial arts now available at Kansas State Teachers College. In addition, recommendations for revisions and upgrading are made on the basis of an "ideal" industrial arts education program as determined by a jury of 12 industrial arts educators.

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81. Bell, T. H., "Public Relations, a Basic Part of Vocational Education," *Agricultural Education Magazine*, July 1964, 37:17

82. Belmont, W. R. (Univ. of Minn.) "The Labor Force Potential of Non-Metropolitan Urban Areas: With an Application to Jamestown, North Dakota," Upper Midwest Economic Study Technical Paper no. 7, 1963, 21 pp.

83. Bender, R. E., "Teacher Preparation for Vocational Education," *Theory into Practice*, December 1964, 3:189-93

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Order U. Microfilms no. 64-4176, Ann Arbor, Mich.

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94. Blackbourn, L. A., "What Agriculture Should Be Taught the First Two Years," *Agricultural Education Magazine*, June 1964, 36:283

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Order U. Microfilms no. 64-3974, Ann Arbor, Mich.

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103. B'nai B'rith Vocational Service, "Occupational Information," Counselor's Information Service, 1962, Vol. 17, No. 1, 16 pp.

104. Bodine, M. W., The Areas of Training Needs of Highly Skilled Technicians in 23 Selected Kansas Industries, Kansas State Dept. of Vocational Ed., 1954

105. Boes, H., "A Vocational Interrelated Program at Beardstown," Illinois' Vocational Progress, April 1965, Vol. 22, No. 4, pp. 6, 28

106. Bogan, F. A., "Employment of High School Graduates and Dropouts in 1964," Monthly Labor Review, June 1965, 88:637-43

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This article presents the Ford student technical training program.

109. Bok, D., "Automation, Productivity and Manpower Problems," Bureau of Labor Statistics, 20 pp.

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113. Bolger, J., "War on Poverty: How Does It Affect Business Education?" Business Education World, June 1965, 45:5

114. Bombach, G. (U. of Basel) "Manpower Forecasting and Educational Policy," Sociology of Education, Fall 1965, Vol. 38, No. 5, 343-74

This paper deals with methods of manpower forecasting in relation to economic growth with the aim of providing tools for educational policy purposes. It is concerned with the interdependence between the educational structure of manpower as derived from economic growth and the output of the educational system. The paper advocates the idea of manpower forecasting as an instrument of educational policy and explains two of its basic aspects: (1) the philosophy behind the concept and (2) the methods of analysis and forecasting.

115. Booth, D. B. (Northwestern Univ., Ill.) "Status Consistency and Occupational Mobility," Northwestern Univ., 1964, 332 pp. Order U. Microfilms no. 65-3243, Ann Arbor, Mich.

This is a study of the effects of parental status on the occupational choices of sons. The thesis is designed to provide information regarding (1) the effects of different types of occupational situses on sons' career decisions; and (2) the utility of applying the concept of status consistency to the analysis of factors influencing rates of intergenerational situs mobility.

116. Bordin, E. S., B. Nachmann, and S. J. Segal (U. of Mich.) "An Articulated Framework for Vocational Development," J. of Counseling Psychology, 1963, Vol. 10, No. 2, 107-16

The major current approaches to the problem of occupational choice (Super, Roe, Tiedeman, Holland, Ginzberg) are compared with regard to their relation to theories of personality, their structural characteristics, and their assumptions regarding the process of choice. A new framework is proposed which attempts to set up a series of dimensions, traceable to infantile psychological functions, which will account for all the gratifications which work can offer. It is then illustrated that any occupation can be described in terms of the relative strengths of these component dimensions and their relation to a series of modifying characteristics. The problems of finding measures for the dimensions and the application of the theoretical framework to job analysis and other issues are discussed. 16 references are cited.

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118. Borus, M. E. (Yale U.) "The Economic Effectiveness of Retraining the Unemployed: A Study of the Benefits and Costs of Retraining the Unemployed Based on the Experience of Workers in Connecticut," Yale U., 1964, 255pp. Order U. Microfilms no. 65-1919, Ann Arbor, Mich.

This dissertation examines the benefits and costs of retraining the unemployed. It finds that the benefits of retraining are considerably greater than the costs and that the government's and economy's benefit-cost ratio for the program are much greater than that of the individual worker. An alternative to the present organization is offered and claims to reduce cost and increase efficiency.

119. Bott, W. K. (Duke Univ.) "An Evaluative Study of the Educational and Vocational Guidance Services and the Curricular Offerings Available in the Accomack County, Virginia, High Schools During the Years 1947-55," Duke U., 1962, 408 pp. Order U. Microfilms no. 63-7009

120. Bournazos, K. (Mich. State Univ.) "A Comparative Study of the Effects of Vocational Training on the Career Patterns of High School Graduates," Mich. State Univ., 1963, 192 pp. Order U. Microfilms no. 64-7487, Ann Arbor, Mich.

The major purpose of this study was to measure the influence of vocational education on the career patterns of white, male high school graduates.

121. Bowen, C. R., "Overview: The Paradoxes of Abundance," *National Association of Secondary School Principals Bulletin*, November 1964, 48:3-15

122. Bowman, P. H. and C. V. Matthews, *Motivations of Youth for Leaving School*, 1960

A detailed study of a group of dropouts in Quincy, Illinois. It covers the backgrounds, characters, and motivations of the young people, and demonstrates those factors common to most dropouts, to aid in early identification of potential dropouts.

123. Braden, P. V. (Mich. State Univ.) "Effects of High School Vocational Office Training upon Subsequent Beginning Career Patterns," Mich. State Univ., 1963, 176 pp. Order U. Microfilms no. 64-4939, Ann Arbor, Mich.

This study was concerned with determining the effects of varying amounts and types of vocational office training on the subsequent beginning career patterns of female high school graduates.

124. Bradley, H. R., "Agriculture in Kansas Area Vocational Schools," *Agricultural Education Magazine*, April 1965, 37:240-1

125. Brady, J. T., et al., "Close-up of the Technician, Engineering Semi-Pro?" *Machine Design*, May 12, 1960, Vol. 32

126. Brady, J. T., *Teamwork in Technology Managing Technician Manpower*, Scarsdale, New York, Technician Manpower Associates, 1954

127. Brady, R. A., *Organization, Automation, and Society*, Berkeley, Univ. of Calif. Press, 1963

128. Brandon, G. L., *Twin Cities Technicians: A Limited Survey of Industrial Technicians*, Michigan State Univ., College of Ed., 1958, 70 pp.

129. Brandon, G. L., *An Investigation Toward Development of a Research Design for Discovering the Functional Understandings of Technicians as Bases for Technical Curriculum Planning*, U.S. Office of Education, Cooperative Research Branch, Project 629, 1960

130. Brandon, G. L. and R. N. Evans, "Research in Vocational Education," *National Social Study Education Yearbook*, 64 pt 1965, 1:263-79

131. Brantner, S. T. (Univ. of Pittsburgh) "An Appraisal of Selected Courses of the Vocational Trade and Industrial Teacher Education Curriculum in Pennsylvania," Univ. of Pittsburgh, 1962, 196 pp.
Order U. Microfilms no. 62-5145, Ann Arbor, Mich.

132. Brazziel, W. F., "Basic Education in Manpower Retraining Programs," Adult Leadership, November 1964, 13:145-6

133. Brazziel, W. F., "Recruitment Problems in Manpower Training and Poverty Programs," Vocational Guidance Quarterly, Summer 1965, 13:291-6

134. Brennan, M. J. (Penn. State Univ.) "Beliefs and Practices of Michigan and Pennsylvania Home Economics Educators Related to Certain Generalizations in Teacher Education," Penn. State Univ., 1963, 116 pp.
Order U. Microfilms no. 64-5343, Ann Arbor, Mich.

135. Bricker, A. J., "Education for Leadership in Tomorrow's World," J. Home Economics, June 1964, 56:383-8

136. Bright, J. R., "Does Automation Raise Skill Requirements?" Harvard Business Review, July-August 1958, Vol. 36

137. Brooking, W. J., "The Metallurgical Technician. What He Does: How He Is Educated: Why More Are Needed," Metals Review, September 1964, Vol. 37, No. 9, 2 pp.

138. Brooking, W. J. and M. H. Mahar, "Libraries for Technical Education Programs," School Life, October 1964, 47:9-13

139. Brookover, W. B. and S. Nosow, "A Sociological Analysis of Vocational Education in the United States," Education for a Changing World of Work: Report of the Panel of Consultants on Vocational Education, Appendix III, OE-80021, Order U.S. Government Printing Office, 1963

140. Brooks, G. G., "Advance Planning for Manpower Adjustments at the Plant Level and the Role of the Manpower Consultative Services," Paris, Washington, D.C., O.E.C.D., Social Affairs Division, December 8-10, 1964, 21 pp.

North American Joint Conference on the Requirements of Automated Jobs and Their Policy Implications, Washington, D.C., Part C - Facilitating Worker Adjustment to Technological Change, Report No. 14

141. Brooks, L. B., "Norfolk State College Experiment in Training the Hard-Core Unemployed," Phi Delta Kappan, November 1964, 46:111-16

142. Brooks, L. B., et al. (Virginia State Coll., Norfolk Div.) "Training the Hard-Core Unemployed: A Demonstration-Research Project at Virginia State College, Norfolk Division," U.S. Dept. of Health, Ed. and Welfare, Office of Ed., Washington, D.C., U.S. Office of Education Cooperative Research Monograph no. 13, 1964, 101 pp.

143. Brooks, T. R., "Problem of Mobility," Dun's Rev. and Modern Industry, November 1963, 82:54

144. Brooks, T. R., "Blue Collar Elite: Changing Technology of the Modern Factory Calls for New Skills," Dun's Review and Modern Industry, March 1964, 83:121-2
Condensed version in Management Review, April 1964, 53:28-31

145. Brotherton, W. A. (Colo. State Coll.) "Engineering Technology Education in Memphis, Tennessee: A Study of Needs," Colo. State Coll., 1964, 150 pp.
Order U. Microfilms no. 65-221, Ann Arbor, Mich.

This study sought to ascertain the feasibility of the establishment of a two-year program of engineering technology education as an instructional department of Memphis State University. Specifically, the following were treated: employment needs of Memphis business and industry with respect to those occupations which require the post-secondary engineering technology type of education for entry or retraining, the extent to which these are being met by existing educational facilities, what additional facilities are needed, and whether or not such a program would be compatible with the purposes and program of Memphis State University.

146. Brown, D. W., "Vocational Preparation for the World of Tomorrow," Volta Review, September 1964, 66:368-72

147. Brown, F., "Developing a Desirable Image of Business Education," Business Education Forum, October 1964, 19:21

148. Brown, M. and J. S. DeCani, "Measure of Technological Employment," Review of Economics and Statistics, November 1963, 45:386-94

149. Brown, M. D. (Univ. of Mich.) "A Comparative Study of Attitudes and Opinions Among Selected Groups in Two Michigan Cities with Authoritative Judgment Concerning Occupational and Technical Education in Community Colleges," Univ. of Mich., 1964, 265 pp.
Order U. Microfilms no. 64-12,565, Ann Arbor, Mich.

This study sought to provide authorities in a city with a community college insight into current public attitudes and opinions concerning occupational and technical terminal

programs for purposes of evaluation of current programs and the identification of key issues important to the development of new programs. In addition, the study attempts to identify unfavorable existing attitudes and opinions so that school authorities may mold more favorable ones, to establish a basis for determining public attitudes on educational issues and provide guidelines for eliciting these attitudes, and to provide community college administrators a consensus of authoritative judgment on current issues related to occupational and technical education.

150. Brown, T. C. (U.S. Dept. of Labor) "Occupational Mobility Through MDTA Training," U.S. Dept. of Labor, Office of Manpower, Automation and Training, Washington, D.C., 1964, 9 pp.

151. Bruce, P. L. (Univ. of Missouri) "Status, Content, and Appraisal of Industrial Arts Courses for Elementary Teacher Education in Public Higher Educational Institutions," Univ. of Missouri, 1964, 261 pp.
Order U. Microfilms no. 65-1038, Ann Arbor, Mich.

This thesis discusses and criticizes current status and content of teacher education courses in the field of industrial arts. Recommendations are made for suggested improvements.

152. Bruner, J., "Introduction: The New Educational Technology," American Behavioral Scientist, 1962, Vol. 6, No. 3, 5-7

In the introduction to this issue of the journal (which is devoted to new educational technology), the author presents a new view of education, advocating more prescriptive research and warning against complacency resulting from apparent victories.

153. Brunkan, R. J., "Perceived Parental Attitudes and Parental Identification in Relation to Field of Vocational Choice," J. Counseling Psychology, Spring 1965, 12:39-47

154. Brunner, K. A., "The Training of Subprofessional Personnel in the United States," Paper prepared for the International Conference on Middle Level Manpower, San Juan, Puerto Rico, Washington, 1962

155. Brunner, K.A. and D. G. Morrison, Organized Occupational Curriculums in Higher Education, U.S. Dept. of Health, Ed. and Welfare, Office of Ed., OE-54012, Washington, Government Printing Office, 1961

156. Brunson, L. E. (Univ. of Okla.) "An Evaluation of Secondary School Business Textbook Coverage of Money Management," Univ. of Okla., 1965, 246 pp.
Order U. Microfilms no. 65-12,604, Ann Arbor, Mich.

The criteria of evaluation were applied to the textbooks studied to determine the money management emphasis money, credit, insurance, savings, investment, taxation, and the like.

157. Bryan, G. O., "Give Students a Career Instead of a Job," American Vocational J., October 1964, 39:32-3

158. Bryant, C. D., Sr. (Mich. State Univ.) "Role Priorities of Beginning and Experienced Teachers of Vocational Agriculture in North Carolina," Mich. State Univ., 1963, 156 pp.
Order U. Microfilms no. 64-7492, Ann Arbor, Mich.

The purpose of this study was to determine the priority beginning teachers gave and perceived should be given ten teacher professional roles and to compare their priorities with those of experienced teachers.

159. Buckingham, W., Cooperative Education and the Educational Crisis, New York, Thomas Alva Edison Foundation, 1957

160. Buergler, M. M., "Teaching Typewriting as a Professional," Business Education Forum, November 1965, 20:7-8

161. Bunn, H., "Money by Itself Isn't Enough," Chemical and Engineering News, September 24, 1962, 40:62

This article tells how industry can aid education with equipment gifts and hiring teachers for part-time work.

162. Bunten, J. W., "Our Place in Vocational Education," Agricultural Education Magazine, July 1964, 37:3-4

163. Burchill, G. W., Work-Study Programs for Alienated Youth, 1962

Describes the efforts of eight public school systems and one group of private individuals to provide work-study programs for youth, previously unstimulated, to grow toward adult competence. Those who are concerned with classroom planning and job experiences will find this book very helpful.

164. Burchinal, L. G. and P. E.Jacobson (San Jose State Coll.) "Migration and Adjustment of Farm and Urban Families and Adolescents in Cedar Rapids, Iowa," Rural Sociology, 1963, Vol. 28, No. 4, 364-78

Men of rural background who moved to the city were more likely to be employed in lower status occupations, their wives were more likely to be employed, their older sons to have more absences from school, and their adolescents in general to adjust satisfactorily to urban schools.

165. Burck, H.D. (Fla. State Univ.) "An Experimental Study of Counseling Effects with Low-Ability, High-Educational-Aspiration-Level College Freshmen," Fla. State Univ., 1964, 93 pp.
Order U. Microfilms no. 64-10,576, Ann Arbor, Mich.

The main purpose of this study was to evaluate the effects of individual counseling with a group of male college freshmen who had defined high educational aspirations (pre-medicine, pre-dentistry, pre-law, and pre-engineering) and relatively low academic ability. A single, immediate criterion of change from relatively inappropriate educational aspiration to an aspiration that was judged to be more appropriate was used. Also, an attempt was made to measure changes of personal and social adjustment that would occur between counseled and non-counseled students.

166. Burdette, W. E., "Instructional Aids in Industrial Education," Arizona State Univ., Temple, Ariz., 1962, 129 pp.

167. Burdin, J. L., "Faculty Selection and Retention: A Quest for Quality," Teachers College J., January 1965, 36:185-7

168. Burkett, L. A., "Critical Issues in Vocational Education," G. S. Swanson (ed.), Vocational Education for Rural America, Washington, Department of Rural Education, National Education Association, 1960

169. Burkett, L. A., M. E. Strong, and O. D. Trapp, "Vocational and Technical Education: Issues, Developments, Principal's View," National Association of Secondary School Principals Bulletin, November 1963, 47:150-160

170. Bushnell, D. S., "Occupational Research and Planning," American Vocational J., May 1965, 40:10

171. Butcher, S., "How Can We Make Business Education Respectable?" J. Business Education, April 1965, 40:278-9

172. Byram, H. M., "Re-planning High School Programs in Agricultural Education," Agricultural Education Magazine, October 1963, 36:90-1

173. Cadugan, W., "Possible Effects of Automation on Business Education," J. Business Education, April 1965, 40:314

174. Calder, C. R., Jr. (U. of Conn.) "A Comparison of the Relative Effectiveness of Four Methods of Teaching Manipulative Activities," Univ. of Conn., 1964, 248 pp. Order U. Microfilms no. 65-2700, Ann Arbor, Mich.

This study compares the effectiveness of four selected instructional treatments: self-instruction, lecture-demonstration (classroom), lecture-demonstration (television), and no-instruction methods of teaching manipulative activities. Results show that self-instruction was most effective, lecture-demonstration (classroom) less, lecture-demonstration (television) still less, and no-instruction least effective, as measured by quality of student subject performance.

175. Technical Education in California Junior Colleges, Sacramento, California State Dept. of Ed., 1963

176. Counselor's Guide to Apprenticeable Occupations, Bureau of Pupil Personnel Services Bull. no. 11, 1956, 18 pp., Sacramento, Calif., Calif. State Dept. of Ed., Bureau of Pupil Personnel Services

177. "Occupational Pamphlets; a Revised List of Free and Inexpensive Pamphlets," Sacramento, Calif., Bureau of Guidance, 1956, 17 pp., California State Dept. of Ed., Bureau of Pupil Personnel Services

178. Community Labor Market Surveys, California, 1962, Sacramento, Calif., Bureau of Research and Statistics, 1963, Calif. State Dept. of Employment

179. "Occupational Guide, Patternmaker (Foundry), Los Angeles-Long Beach-Orange County Area," Sacramento, Calif., California State Dept. of Employment, 1963, 4 pp.

Explains the work performed by wood and metal foundry patternmakers, and discusses working conditions, employment prospects, pay and working hours, promotions, and additional sources of information about this trade.

180. Manpower Resources, San Francisco-Oakland Bay Area, 1960-1970, San Francisco, Calif., California State Dept. of Employment, 1963, 64 pp.

Analyzes the industry and occupational composition of the area. Area population and labor force are projected to 1970, and manpower needs by occupational group to 1965. Comments on labor force participation of young people and older workers.

181. Campbell, J., "Expanding the Role of Vocational Agriculture," *American Vocational J.*, September 1964, 39:31-2

182. Canada, R. W., "Teaching Farm and Non-Farm Boys in Same Class," *Agricultural Education Magazine*, September 1965, 38:62-3

This article presents a suggested four-year curriculum design for vocational and agricultural occupations classes

183. "Canada: Report on Developments in Education, 1964-65," *Canadian Education & Research Digest*, June 1965, 5:96-7

This article considers technical and vocational education.

184. Cangemi, J. P., "Short Term, Terminal Course for Potential Dropouts," *American Vocational J.*, January 1965, 40:10

185. Cangemi, J. P.,"Raising Status and Esteem of Public School Teachers," *Clearing House*, May 1964, 38:540-2

186. Caplow, T., *The Sociology of Work*, Minneapolis, The University of Minnesota Press, 1954, p. 134

187. Cardozier, V. R., "Vocational Education and Federal Control," *American School Board J.*, April 1965, 150:30-2

188. Carey, W. F., "Businessman's Role in Education; Useful Education for Tomorrow's Jobs," *American Vocational J.*, April 1965, 40:24-5

189. Carlberg, M., "How Are High Schools Handling Data Processing Programs?" *Business Education World*, November 1965, 46:16-18

190. Carr, J. B., "Senior English: Business Emphasis," *English J.*, November 1964, 53:614-16

191. Carter, C. P., "Vocational Guidance: The Investigation of Occupations," *Industrial Arts and Vocational Education*, June 1963, 52:12-13

192. Carter, D. M. (State Univ. of Iowa) "A Study of Office Training Programs for Data-Processing Personnel in Selected Businesses in Metropolitan Denver, Colorado, with Implications for Business Education in the Secondary Schools," State Univ. of Iowa, 1965, 379 pp.
Order U. Microfilms no. 65-11,601, Ann Arbor, Mich.

193. Cavanaugh, D., "Industry's Needs and the Vocational School," School Shop, March 1964, 23:17-19

194. "Accredited Correspondence Eduation: An Answer to Training Needs of Business," Special Supplement to Washington Report, Washington, Chamber of Commerce of the United States, November 30, 1962

195. Chansky, N. M., "Principals Endorse Occupational Education," Agricultural Education Magazine, August 1965, 38:41

196. Chavrid, V., "U.S. Employment Service: Where Jobs and Workers Meet," School Shop, April 1965, 24:64-6

197. Programs for Potential Dropouts, Board of Education, Study Report No. 3, Chicago, 1964

Brief, but excellent descriptions of the existing programs for potential dropouts in the City of Chicago, and recommendations for their expansion and improvement.

198. Christensen, V. E., "Factors Influencing Classroom Achievement in Vocational Agriculture," Agricultural Education Magazine, April 1965, 37:254-5

199. Christenson, C. L., Economic Redevelopment in Bituminous Coal: The Special Case of Technological Advance in United States Coal Mines, 1930-1960, Cambridge, Harvard University Press, 1962, 312 pp.

Attempts to determine the impact of technological advances on employment and earnings. Considers changing patterns of fuel consumption, competition in the industry, and pressures toward mechanization. Assesses social costs of mechanization and proposes increasing the mobility of the unemployed through retraining, encouraging area redevelopment, and inducing miners to accept wage variation.

200. Christian, J., E. P. Amidon, and G. G. Dozier, "Home Economics: Issues, Development, Principal's Views," National Association of Secondary School Principals Bull., November 1963, 47:59-72

201. Christopherson, D. G., "New Needs in Technological Education," Times Education Supplement, February 19, 1965, 2596:502

202. Chu, D. C., "How Can Teachers' Prestige Be Raised?" J. Experimental Education, Summer 1964, 32:333-46

203. Continuing Education for Adults, No. 32, Chicago, Center for the Study of Liberal Education for Adults, March 1963

204. Ciancone, E. S. (Ind. Univ.) "A Comparative Analysis of Industrial Arts Teacher Education Masters Degree Programs: With Suggestions for Revision of Those in the State of Indiana," Indiana Univ., 1962, 213 pp.
Order U. Microfilms no. 62-5776, Ann Arbor, Mich.

205. Clague, E., "What Employment Statistics Show," Automation, April 1964, 11:48-9

206. Clague, E., "Occupational Outlook," National Association of Secondary School Principals Bull., November 1964, 48:37-44

207. Clark, B. R., Educating the Expert Society, San Francisco, Chandler Publishing Co., 1962

208. Clark, H. F. and H. S. Sloan, Classrooms in the Factories, Rutherford, N. J., Fairleigh Dickinson University, 1958

209. Clark, R. M., "Michigan Workshop Studies Nonfarm Agricultural Business," Agricultural Education Magazine, November 1963, 36:108-10

210. Clary, J. R., "Four Steps for Pilot Programs," Agricultural Education Magazine, July 1964, 37:14-15

211. Clary, J. R., "Guidelines for Developing Agricultural Technician Training Programs," Agricultural Education Magazine, June 1965, 37:323-4

212. Clary, J. R. (Ohio State U.) "Guidelines for the Development of Training Programs for Agricultural Technicians," Ohio State Univ., 1964, 325 pp.
Order U. Microfilms no. 65-1169, Ann Arbor, Mich.

This investigation seeks to determine the status and characteristics of present training programs for agricultural technicians and to determine the degree of emphasis administrators of present programs believe should be given to certain procedures in developing successful training programs. The thesis includes an attempt to synthesize, refine, and evaluate a tentative set of guidelines for use in planning and conducting training programs for agricultural technicians.

213. Clary, J. R. and H. E. Beam, "Realistic Vocational Education for Ninth Graders," *American Vocational J.*, May 1965, 40:16-17

214. Clawson, B. and H. Johnson, "Application in the Classroom of Our Beliefs About Teaching," *J. Home Economics*, February 1965, 57:129-32

215. Clepper, H. E., ed., *Careers in Conservation; Opportunities in Natural Resources*, Natural Resources Council of America, Ronald, 1963

216. *Unemployed Out-of-School Youth Survey*, Cleveland, O., Cleveland Public Schools, Bureau of Ed. Res., 1962

217. Cobb, M. C., *Scientific Approach to Career Planning*, Lantern Press, 1961

218. Coe, B. D., "Vocational Education in the High School," *Theory into Practice*, December 1964, 3:171-4

219. Coe, B. D. and J. H. Zanzalari, "Vocational Technical School Graduates: Ten Years Later; Middlesex County Vocational and Technical High Schools, *American Vocational J.*, April 1965, 40:14

220. Cohen, A., "Sociological Studies of Occupations as a Way of Life," *Personnel & Guidance J.*, November 1964, 43:267-72

221. Coleman, R. W. (Univ. of Ill.) "Kurt Lewin's Theory of Social Change Applied to Curriculum Change," Univ. of Ill., 1964, 125 pp.
Order U. Microfilms no. 65-3194, Ann Arbor, Mich.

The purpose of this study was to show the applicability of Lewinian theory of social change to curriculum change and to formulate a set of principles based on this theory that may be used as a basis for any specific strategy of curriculum change in a particular school situation.

222. Colson, J. M. (N. Y. Univ.) "An Analysis of Curricula for Preparation of Business Education Teachers in Selected Pennsylvania Colleges," New York Univ., 1962, 315 pp.
Order U. Microfilms no. 62-3294, Ann Arbor, Mich.

223. Conafay, K. R., "Homemaking and Wage Earning Through Home Economics," *Educational Leadership*, January 1965, 22:226-9

224. Conant, J. B., *The Education of American Teachers*, New York, McGraw-Hill, 1963, 275 pp.

225. Conrad, H.S., "Research in Education: Directions and Misdirections," Teachers College Record, U.S. Office of Education, Vol. 64, No. 1, pp. 13-19, 1962

Educational research should concern itself not only with what to do but how to do it. It should use more often the large-scale, long-term comprehensive "systems" approach. Key problems are gaining recognition for the contributions of psychological research and getting enough money. "Rudolph Flesch, in a book devoid of scientific merit, was able to single handedly blackball years of research and progress in the teaching of reading." Why was this possible?

226. Cooley, W. W., "Computer-Measurement System for Guidance," Harvard Educational Review, Fall 1964, 34:559-72; Discussion: Winter-Spring 1965, 35:77-80, 211

227. Corbman, B. P. and M. Hirshfeld, "Successful Cooperative Work Experience Programs," J. Business Education, November 1965, 41:62-4

228. Corey, J.,"North Carolina's New System of Vocational and Technical Education," Phi Delta Kappan, April 1965, Vol. 46, No. 8, pp. 383-388

229. Cornelsen, L. A., "Economics of Training the Unemployed," School Life, October 1964, 47:17-18
Condensed in Monthly Labor Review, June 1965, 88:672

230. Coster, J. K., et al., "Appraisal of Twenty-Five Purposes of Vocational Agriculture," Agricultural Education Magazine, March 1964, 36:212-14

231. Cotgrove, S., "Effective Research in Technical Education," Educational Research Bull., November 1963, 6:59-62

232. Cotton, D. A., "Farm Mechanics Instruction for Oklahoma Teachers," Agricultural Education Magazine, June 1964, 36:285

233. Coupland, J. (Ohio State Univ.) "Importance of Units of Instruction in the High School Vocational Agriculture Curriculum," Ohio State Univ., 1962, 274 pp.
Order U. Microfilms no. 63-4647, Ann Arbor, Mich.

The study centered around the determination of the relative importance of units of technical agriculture which might be included in a high school program of instruction, the isolation of units which were essential to this program, and the development of a guide to agricultural content which might be included in the program.

234. Courtney, E. W. (Purdue Univ.) "A Comparison of Knowledge and Experience Levels Required in Three Agricultural Occupations," Purdue Univ., 1962, 89 pp. Order U. Microfilms no. 63-111, Ann Arbor, Mich.

235. Cozine, J. (Oklahoma State Univ.) "Home Economics Education," Review of Educational Research, 1962, Vol. 32, No. 4, 393-401

Even though various phases of home economics have been extensively incorporated into many elementary school programs, the amount of research reported at this level has been limited. More than one-half of the research studies have been at the secondary level. During the past six years, various techniques have been used in identifying factors and changes in our society which have direct bearing on the success of programs in home economics. The most extensive study concerning psychological aspects of a college program in home economics was done by Clarke, who studied the expressed goals of 91 educators in home economics and 687 senior students in 39 colleges and universities in 36 states. If education in home economics is to improve, emphasis on research must be increased.

236. Crawfis, J. E., "Slow Learner in Business Education," J. Business Education, November 1965, 41:19-21

237. Crockett, H. J., Jr. "The Achievement Motive and Differential Occupational Mobility in the United States," American Sociological Review, 1962, Vol. 27, No. 2, pp. 191-204

TAT responses from a national sample of 175 males were scored for achievement motivation in order to determine the relation between the strength of this motive and intergenerational occupational mobility in the United States. "Atkinson's theory of achievement motivation, shown to be relevant to the study of occupational mobility, predicts that strength of achievement motive--among persons sharing equal opportunity--will be positively correlated with upward occupational mobility and negatively associated with downward occupational mobility. In the national sample studied, the expected results are clearly obtained with regard to upward mobility among persons reared in the lower social strata, but predicted relationships are not found among persons reared in the middle and upper strata. The hypothesis concerning strength of achievement motive and downward mobility is not supported. The results indicate the fruitfulness of considering personality variables in conjunction with social structure variables in the study of occupational mobility."

238. Crosby, R. W., "Mixed News in Job Trend Survey," Iron Age, April 23, 1964, 193:58-9

This report covers 36 industries, including major metalworking areas.

239. Crossman, E.R.F.W., Automation and Skill, Problems of Progress in Industries Series, no. 9, London, England, Great Britain Dept. of Science and Industrial Research, 1960, 58 pp.

240. Cully, S. E. and T. L. Clark, "Learning and Earning: A Model Venture," J. Secondary Education, April 1964, 39:162-5

241. Curtis, T. B., "Automation, Change and the Technological Process," National Association of Secondary School Principals Bull., November 1964, 48:16-21

242. Dabkowski, E., "Business Teacher Work Experience," Balance Sheet, October 1964, 46:96

243. Dana, S. T. and E. W. Johnson, Forestry Education in America Today and Tomorrow, Washington, D.C., Soc. of American Foresters, 1963, 402 pp.

244. Danovitz, S., "Area Technical High School; a Promising Development in Opportunity Education, May 1965, NEA J., 54:41-3

245. Danton, L.A. (Univ. of Nebraska) "The Omaha Experiment, A Study of a Community Effort To Cope with Unemployment Resulting from Plant Mechanization," Univ. of Nebraska, 1964, 321 pp.
Order U. Microfilms no. 64-11,926, Ann Arbor, Mich.

This study discusses automation unemployment and the steps that were taken to counteract its effects when a large meat packing company's opening of a new plant in 1961 left 700 Omaha workers permanently separated from their jobs. This study evaluates the efforts of the community action as embodied in a specially appointed committee, the retraining program financed by the automation fund, the effectiveness of the special methods utilized by the Public Employment Service, etc. It analyzes long-range results and trends evident after the various efforts had been made to solve the problem of automation unemployment in this instance.

246. Dauwalder, D. D., Education and Training for Technical Occupations, San Fernando Valley, California, Los Angeles, Calif., Los Angeles City Junior College District, 1962

247. Davey, E. J., "Provide the Tools; A Basic Program for the Nonacademic Pupil," Clearing House, February 1965, 39:351-2

248. Davidson, H. H., F. Riessman, and E. Meyers, "Personality Characteristics Attributed to the Worker," J. Sociological Psychology, 1962, Vol. 57, No. 1, pp. 155-60

The hypothesis was that persons in higher occupational categories would be rated more positively in personality characteristics than persons in the lower occupational groups. The subjects were 241 undergraduate students, males and females, attending classes in psychology and education. They varied in social class background. A checklist of 30 personality characteristics, with regard to 5 selected occupational groups was used. Before checking the list of characteristics, the students were asked to give a brief personality description of an individual who had been described to them using Asch's technique. The occupational groups differed significantly in 12 of 30 characteristics. Positive characteristics: industrious, practical, thoughtful, serious, polite, confident, cautious, intelligent, were distributed about equally among the factory owner, assistant office manager, teacher, and physician. The worker emerged as having the lowest mean score of all these qualities. More negative characteristics were attributed to factory workers than to any of the other occupational groups.

249. Davis, B. G., "Engineering Technicians Increase Engineer Productivity," Tool and Manufacturing Engineer, January 1959, Vol. 47

250. Davis, L. E., "The Effects of Automation on Job Design," Industrial Relations, October 1962, pp. 53-71

States that variations in "operator level jobs" under automation prohibit direct comparisons of content and skills. Many skills appear to be nontransferable. Automation increases an operator's responsibility and confronts him with an overall view of the process. Automation will upgrade the job structure of the economy as a whole, since more professional workers will be required.

251. Dawson, K. E., "Industrial Arts and the World of Work," Educational Leadership, January 1965, 22:236-8

252. Dawson, K. E. and L. A. Burkett, "Industrial Arts and Vocational Education," NEA J., November 1965, 54:35-8

253. Day, H. L., "Effective Program Trains Inspectors," Public Works, January 1965, 96:74-7

254. Day, J. E., "Tomorrow's Programmers," National Association of Secondary School Principals Bull., September 1964, 48:54-6

255. Dean, C. T. and P. L. Kleintjes, "Industrial Technology: Pilot Program at Long Beach," Industrial Arts and Vocational Education, June 1964, 53:27-8

256. Dearle, D. A., Opportunities in Plastics Careers, Vocational Guidance Manuals, New York, 1965, 144 pp.

257. Defore, J. J., "Survey of Credit Hours in the Physical Sciences," Technical Education News, December 1963, 23:5

258. Dennard, C. L. (Univ. of Tenn.) "The Administrative Organization and Practices of Selected Vocational-Technical Schools in the United States with Implications and Projections for the Atlanta Vocational-Technical School," University of Tenn., 1964, 198 pp.
Order U. Microfilms no. 65-5080, Ann Arbor, Mich.

The purpose of this study was (a) to examine the administrative organization, curriculum, personnel services, staffing, and instructional practices of selected vocational-technical schools in the United States, and (b) to draw implications and make projections from this examination for the organization of the Atlanta Vocational-Technical School.

259. Dent, O. B. and R. F. Elder, "Vocational Preference Rank Technique," Personnel and Guidance J., April 1965, 43:801-3

260. Derleth, A., "Social Position of the Teacher," (with a reply by J. T. Benson), Wisconsin J. of Education, May 1964, 96:11-12

261. Des Marais, P. H., "New Developments in Occupational Training and Vocational Education," Balance Sheet, September 1964, 46:21-3

262. Deuel, R. P., "Salesmanship: Is There a Role for Business Educators?" J. Business Education, October 1964, 40:25-6

263. Devore, P. W., K. E. Dawson, and R. E. Wright, "Practical Arts: Issues, Developments, Principal's View," National Association of Secondary School Principals Bull., November 1963, 47:108-20

264. Dick, A. A., "Case for the Self-Contained Technical-Vocational High School," Industrial Arts & Vocational Education, May 1965, 54:26-9 (Condensed in American School Board J., April 1965, 150:50-1)

265. Di Grande, S., "Project III Experience," *High Points*, October 1965, 47:70-2

266. Dils, E., "Placement and the Business/Education Gap," *J. College Placement*, April 1965, 25:119-20

267. Dilts, H. E. (State Univ. of Iowa) "A Follow-up Study of Iowa Trade and Industrial Graduates for the Years 1957 and 1961," State Univ. of Iowa, 1963, 224pp.
Order U. Microfilms no. 64-3363, Ann Arbor, Mich.

268. Dittman, N. A., "Spend This Summer in an Office," *J. Business Education*, May 1964, 39:350

269. Dobrovolny, J. S., *Machine Design Technology*, Springfield, Illinois Board of Vocational Education and Urbana, University of Illinois, June 1963

270. Dobrovolny, J. S., *Electronic Technology, A Suggested Two-Year Post-High School Program*, Engineering Technology Series No. 2, Springfield, Illinois Board of Vocational Education and Urbana, University of Illinois, June 1964

271. Dobrovolny, J. S., "Preparation of Junior College Teachers of Technical Subjects," *Junior College J.*, December 1964, 35:9-13

272. Dobrovolny, J. S., "Development of Technical Institute Education and Its Impact on Engineering," paper presented at the annual meeting of the Technical Drawing Association, New York, October 19, 1960.

273. Donker, L., "Learning on the Job Important to Agricultural Technicians," *Agricultural Education Magazine*, August 1964, 37:29-30

274. Doolittle, L. W. (Univ. of Mich.) "A Pupil Holding Power Study in Four Detroit High Schools," Univ. of Mich., 1964, 190 pp.
Order U. Microfilms no. 65-5894, Ann Arbor, Mich.

The first purpose of this study was to determine the relationship between certain levels of attendance, income neighborhood, intelligence, reading ability, arithmetic ability, age in grade, sex, and superior success in a sequence of courses with the completion of high school. The second purpose of this study was to determine the pupil holding power of six curricula for the various levels of the characteristics mentioned above except superior success in a sequence of courses. The six curricula studied were college preparatory, business education, courses leading directly to employment, courses not included in any other curricula, general shops for boys and home economics for girls, and "basic" trade such as machine shop, model shop, and drafting. Among other things, it was found that the assigning of a group of courses to a child in which he can find superior success is probably more important in keeping a child in school than the inclusion in those courses that make up "basic" trade curricula.

275. Dorr, E. L. and A. L. DeMond, "Adult Preparatory Education for Careers in Distribution," *Business Education Forum*, April 1964, 18:16-18

276. Dougan, J. E., "Let's Tool Up for Training Technicians in Agriculture," *Agricultural Education Magazine*, July 1964, 37:12-13

277. Douglas, L. V., "New Emphasis on Research in Vocational Business Education," *Business Education Forum*, January 1965, 19:9-10

278. Drawbaugh, C. C. (Penn. State Univ.) "A Teaching Experiment in the Use of Greenhouse Facilities in Vocational Agriculture, Penn. State Univ., 1963, 130 pp.
Order U. Microfilms no. 64-5353, Ann Arbor, Mich.

279. Drew, A.S., "Resource Units in Industrial Education," *Industrial Arts and Vocational Education*, June 1964, 53:30-1

280. Drew, L. J., "Developmental Reading in Industrial Arts at the Junior-High-School Level," *School Shop*, October 1964, 24:40-1

281. Drozdoff, G., "Teacher-Prepared Programed Units for Industrial Subjects," *Industrial Arts and Vocational Education*, October 1964, 53:43

282. DuBridge, L. A., "Educational and Social Consequences," John T. Dunlop, ed., *Automation and Technological Change*, Englewood Cliffs, N. J., Prentice-Hall, Inc., 1962

283. Dugan, W. E., "Vocational Guidance--Its Contributions and Opportunities," G. S. Swanson, ed., *Vocational Education in Rural America*, Washington, Department of Rural Education, National Education Association, 1960

284. Duncan, G. S., "Toward a Better Understanding of Industrial Arts in the Elementary Schools," *Industrial Arts and Vocational Education*, December 1963, 52:18-19

285. Duncan, O. D. and R. W. Hodge (Univ. of Mich.) "Education and Occupational Mobility: A Regression Analysis," American J. of Sociology, 1963, Vol. 68, No. 6, pp. 629-44

Regression analysis of occupational mobility is made feasible by recent work providing socioeconomic status scores for detailed occupations. Data from the Chicago portion of the 1951 Six-City Survey of Labor Mobility reveal correlations of about .3 between respondents' occupational scores and those of their fathers, while respondents' educational attainment has a somewhat greater influence, as indicated by correlations of .4 or .5. Sons of farmers and nonwhites were handicapped by comparison with respondents from nonfarm origin and attainment accompanied by decreasing dispersion of number of school years completed, evident in intercohort comparisons; education was no less important as a determinant of occupational status in 1950 than in 1940.

286. Duncanson, D., "Educational Programs for Non-College-Bound Youth," Teachers College J., November 1964, 36:61

287. Dunnett, D., "Agriculture Education for a Changing Agriculture; a Report," American Vocational J., February 1964, 39:19-20

288. Dunnett, D., "Technical Education Programs for the Employment of Highly Skilled Technical Occupations To Accommodate Rapidly Changing Requirements," American Vocational J., February 1964, 39:28-30

289. Training Opportunities at Dunwoody Institute, Minneapolis, Dunwoody Institute, 16 pp.

290. Dvorak, B. J. et al., "New Directions in U.S. Employment Service Aptitude Test Research," Personnel & Guidance J., October 1965, 44:136-41

291. Dye, E. L. (Okla. State Univ.) "An Analysis of Factors Associated with the Quality, Nature, and Extent of Farm Mechanics Experience Received by Student Teachers of Vocational Agriculture," Okla. State Univ., 1961, 110 pp. Order U. Microfilms no. 62-1592, Ann Arbor, Mich.

292. Dyment, R., "Shop Training at B. R. DeWitt, Inc., Assures Supply of Qualified Mechanics," Pit and Quarry, July 1964, 57:70-1

293. Ebbert, M. et al., "Programed Instruction for Agricultural Education," American Vocational J., May 1964, 39:20-1

294. Eckaus, R. S., "Economic Criteria for Education and Training," Review of Economics and Statistics, May 1964, 46:181-90

This article includes tables.

295. Edington, E. D., "Cooperative Training in Nonfarm Agricultural Occupations," American Vocational J., November 1965, 40:24-5

296. Edmondson, N. P., "Education by Automation," Advanced Management, January 1964, 29:40-2

This article tells of the use of a device called Digiflex in the retraining of displaced workers.

297. Education Council of Graphic Arts Industry, Washington, D.C., "Use of Aptitude Tests in School Printing Course," Personnel and Guidance, 1963, Vol. 42, No. 4, p. 386

Four vocational high schools in the U.S. are involved in a Department of Labor research project to determine the feasibility of using aptitude tests in counseling young people interested in craft and technical jobs in the printing industry. Local state employment service offices are administering the General Aptitude Test Battery in cooperation with guidance counselors and printing teachers in the schools. The objective of the study is to determine the validity of GATB norms, standardized for high school graduates, for predicting success of 9th, 10th, and 11th grade students in vocational-technical school printing courses, and, eventually, in specific printing occupations.

298. Educational Media Index: Industrial and Agricultural Education, New York, McGraw-Hill Book Co., 1964, 235 pp.

This is Volume 9 in a 14-volume directory of nonbook instructional materials. This volume lists all the teaching materials available in the area of industrial and agricultural education. Included are films, filmstrips, kinescopes; slides and transparencies; maps, charts, and graphs; flat pictures; video tapes, phonographs and phonodiscs; programmed instructional materials; models and mock-ups; and cross-media sets. Listings are arranged according to age level and subject, giving the source, content, and price.

299. Efron, J., "Philosophy of Distributive Education," N.Y.Social Experimental Study Education Yearbook, 1963, 59:61

300. Eggenberger, U. L. (Iowa State Univ. of Sci. and Technol.) "An Analysis of High School Vocational Agriculture from Evaluations of Graduates in West Texas," Iowa State Univ. of Sci. and Technol., 1964, 177 pp.
Order U. Microfilms no. 64-10,638, Ann Arbor, Mich.

This study sought to determine the present occupational status of West Texas high school graduates of 1953, 1954, and 1955, who had completed one or more years of vocational agriculture, to determine factors related to occupational choices of graduates, to evaluate the high school course areas and the vocational agriculture programs as related to the occupations of the graduates, and to determine possible changes to be made in vocational agriculture in order to meet the needs of male high school graduates.

301. Ehrle, R. A., "Vocational Planning Information Available to Employment Service Counselors," Vocational Guidance Quarterly, Winter 1964/65, 13:91-4

302. Eisen, N. B., "Guidance Tool Called Work Experience Education," J. Secondary Education, December 1964, 39:372-5

303. Eisler, S. M., "Medical Technology: A New Course for the Inner City High School," Science Teacher, March 1965, 32:33-4

304. Ellis, I. T. and R. L. Martino, "Two Viewpoints on Employment Trends," Chemical Engineering, October 12, 1964, 71:197-9

This article consists of two portions, one by each of the authors.

305. Ellis, W. T., "New High School Vo-Ag Courses Developed," Agricultural Education Magazine, April 1965, 37:250-1

306. Elmgren, G. T., Jr. (Univ. of Calif., Los Angeles) "The Relationship of the Vocational Goals and Aptitudes of Junior College Technical Students to Employment Requirements," Univ. of Calif., 1963, 265 pp.
Order U. Microfilms no. 63-6832, Ann Arbor, Mich.

Purposes of the study include the identification of occupational goals of students with technical majors in the fields of drafting, electronics, and welding, the identification of the apparent aptitude and intelligence of these students, the determination of the number of students who complete the required sequence for their major, the identification of the current and projected manpower requirements for industry in the above fields, the amount of education and

intelligence or natural ability which industrial concerns say employees must have to be adequately equipped for success, and the determination of an identifiable and definite relationship between employment requirements and the student goals and aptitudes.

307. Elonka, S., "Programmed Instruction for Training Energy Systems Technicians," Power, July 1963, 107:163-8

308. Ely, V. K., "Education for Occupational Growth," American Vocational J., April 1965, 40:29-30

309. Emerson, L. A., "Technical Training in the United States," Education for a Changing World of Work: Report of the Panel of Consultants on Vocational Education, Appendix I, OE-80021, Washington, Government Printing Office, 1963

310. Engelbrektson, S. (N. Y. Univ.) "Industrial Arts: Its Application to Astronomy." The Development of a Resource Unit in Astronomy for the Industrial Arts Curriculum in the Junior High Schools of New York State, N. Y. Univ., 1961, 419 pp.
Order U. Microfilms no. 62-1394, Ann Arbor, Mich.

311. Erbstein, G. B. (Columbia Univ.) "Informal Non-Credit Adult Education in the Public Community Junior College: Current Trends and Future Prospects," Columbia Univ., 1962, 274 pp.
Order U. Microfilms no. 62-4891, Ann Arbor, Mich.

312. Erickson, L. W., "California Business Teacher Education and the New Credential Law," J. Business Education, January 1964, 39:136-7

313. Erickson, R. D., "Team Teaching in the Arts," J. Industrial Arts Education, January 1964, 23:28-9

314. Erwin, C. H. (Ind. Univ.) "An Investigation of Business and Industrial Employment Needs in Relation to Educational and Vocational Preparation in Selected Areas of Illinois," Ind. Univ., 1963, 141 pp.
Order U. Microfilms no. 64-5125, Ann Arbor, Mich.

315. Eshelman, R. H., "More Schools Train Machine Specialists," Iron Age, August 15, 1963, 192:111

316. Evans, L. H. and G. E. Arnstein, editors, Automation and the Challenge to Education, Washington, National Education Association, 1962, 199 pp.

Symposium including 14 working papers by specialists and scholars in several fields of education, the social sciences,

industry, and labor. General agreement that automation will require more intensive education to achieve the welfare of both the individual and society. Among the contributors are Wilma T. Donahue, Harold F. Clark, Einar Hardin, Stanley H. Ruttenberg, Frank H. Cassell, James E. Russell, and Harold Spears.

317. Evans, R. N., Occupational Data Requirements for Educational Planning, Madison, Wisconsin, Center for Studies in Vocational and Technical Education, 1965, 21 pp.

318. Eyster, E. S., "Preparing the Lower One-Third in General Scholastic Ability for Business Employment," J. Business Education, February 1964, 39:180-1

319. Eyster, E. S., "Tomorrow's Business Teacher," J. Business Education, March 1965, 40:226-7

320. Face, W. L. et al., "Conceptual Approach to American Industry," American Council Industrial Arts Teacher Education Yearbook, 1965, 14:60-72
Condensed version in American Vocational J., March 1965, 40:15-17

321. Farkas, J., "Employment Concentration Ratios in Manufacturing," Conference Board Record, April 1964, 1:47-52

322. Farrah, G. (Wayne State Univ.) "The Roles of Citizens Advisory Committees in Curriculum Development: A Special Case in Farmington, Michigan," Wayne State Univ., 1962, 336 pp.
Order U. Microfilms no. 62-3916, Ann Arbor, Mich.

323. Farrar, E. A. (Univ. of Southern Calif.) "Critical Requirements of In-Service Education for Junior College Business Instructors as Determined by Critical Incident Analysis," Univ. of Southern Calif., 1962, 540 pp.
Order U. Microfilms no. 62-6051, Ann Arbor, Mich.

324. Farrell, G. M., "Can't Have a Work Experience Program? Try a Model Office Instead," Business Education World, September 1964, 45:22-3

325. Fawcett, C. W., "Responsibilities of Nonpublic Agencies for Conducting Vocational Education," National Social Study Education Yearbook, 1965, pt. 1, 244-62

326. Report of the Aviation Human Resources Study Board on Manpower Requirements of the Civil Aviation Industry--Project Long Look, Federal Aviation Agency

327. Feingold, S. N., Career Conference for Your Community, B'nai B'rith Vocational Service, 1964

328. Feirer, A. J., "Future Role of Vocational-Technical Education in Our Society," Industrial Arts & Vocational Education, May 1964, 53:23-6

329. Feirer, J., "Needed: Qualified Industrial Arts Teachers," Industrial Arts & Vocational Education, June 1964, 53:15

330. Feirer, J. L., "Programed Learning in Our Instructional Tool Kit," Industrial Arts & Vocational Education, October 1964, 53:25

331. Feirer, J. L., "Has Vocational Teaching Become a Profession?" Industrial Arts & Vocational Education, November 1965, 54:27

332. Fenton, H. M., "High School Goes to the Factory; Western Electric Company, Indianapolis," Adult Leadership, May 1964, 13:5-6

333. Ferguson, Jr., E. T., "College Directed Occupational Experience Program," Business Education Forum, May 1964, 18:44-5

334. *Ferguson, J. L. and F. G.* Dickey, "Career Planning, Job Placement, and Follow-Up," Review of Educational Research, 1962, Vol. 32, No. 4, pp. 377-83

Research of the past 6 years has pointed to an emerging trend toward the development of a more inclusive theory of vocational development. The principal research has been the 20-year longitudinal Career Pattern Study under the direction of Super, and the Harvard Studies in Career Development. The idea of vocational and educational persistence has been the subject of much research and there seems to have been a de facto assumption that persistence is a good thing. The general findings of many studies seem to support a conclusion that while variables--usually interests, aptitudes, and some personality characteristics--may be found that successfully differentiate occupational groups, these variables are not correlated highly with success in training for a specific job or with success on the job. In general, the predictive studies do somewhat better at predicting success in training than at predicting success on the job.

335. Fernandez, G., "Project: Vocational Education," J. Secondary Education, February 1965, 40:65-8

336. Fessant, J. M., "Application of Programmed Learning for Deaf Children to Industrial Arts," American Annals of the Deaf, 1963, Vol. 108, No. 2, pp. 241-4

The development of the teaching machine and its demonstration use are described. Details of the machine are presented.

337. Finch, B., "Summaries of Current Vocational-Education Acts," School Shop, June 1965, 24:17-19

338. Fink, W., "Team Teaching in Industrial Arts," High Points, January 1964, 46:75-7

339. Finn, J. D., "Instructional Technology," National Association of Secondary School Principals Bull., May 1963, 47:99-119

340. Finn, J.D. and D. G. Perrin, Teaching Machines and Programmed Learning--A Survey of the Industry 1962, U.S. Government Printing Office or National Education Association, Technological Development Project

Science, business, and math courses comprehensively cited, including a list of suppliers of machines and instructional devices and bibliography.

341. Fiscus, K. E. (Univ. of Ill.) "A Comparison of Certain Knowledges in Agriculture Needed by Workers in Farming, in Grain Elevator Businesses, and in Agricultural Equipment Businesses," Univ. of Ill., 1965, 349 pp.
Order U. Microfilms no. 65-11,777, Ann Arbor, Mich.

342. Fisher, C. E., "Introducing Fluid Power Education into the High School Curriculum," Industrial Arts & Vocational Education, January 1965, 54:41-3

343. Fisk, E. G., "Training in Today's Industrial Economy," Paper Industry, August 1964, 46:385-9

344. Flanagan, J. C., et al., The American High School Student, Technical Report to the U.S. Office of Education, Cooperative Research Project No. 635; Project TALENT Office, Univ. of Pittsburgh, 1964, pp. 14-4

345. Fleck, H., "Why Have a Core Program?" J. Home Economics, March 1965, 57:237

346. Flood, R. B. (Univ. of Arkansas) "Factors Associated with Success of Adult Education in Vocational Agriculture in Arkansas," Univ. of Arkansas, 1964, 233 pp.
Order U. Microfilms no. 64-10,062, Ann Arbor, Mich.

This study seeks to determine factors which seem to be associated with success in adult farmer education and to formulate recommendations that have implications for further development of programs in adult education in Arkansas.

Among recommendations are the following: Emphasis should be placed on stable attendance rather than large enrollment. Course content should provide for students to plan and put into use a number of improved farming practices. Content of courses should be geared to the educational level and farming status of the students.

347. Adult Offerings Under Minimum Foundation Program Support, July 1, 1962-June 30, 1963, Florida State Dept. of Education Bull. 70H-4, 1962, 56 pp.

348. Fact-Finding in Vocational Education; a Handbook for Conducting Vocational Surveys, State Dept. of Education, Tallahassee, Fla., Bull. 70H-7, 1964, 24 pp.

349. Florida Job Information, Cabinet Maker 1, Florida State Employment Service, Tallahassee, Fla., 32301, 1961, 5 pp.

Describes the nature of the work, and job opportunities, hours, pay, benefits, advancement opportunities, educational requirements, and working conditions in this trade in Florida.

350. Folger, J. K. and C. B. Nam, "Trends in Education in Relation to the Occupational Structure," Sociology of Education, Fall 1964, 38:19-33. Reply with rejoinder by E. Jorgensen, Winter 1965, 38:167-70

351. Forkner, I. H. (Columbia Univ.) "An Achievement Test of Personal-Business Knowledges and Understandings," Columbia Univ., 1963, 190 pp.
Order U. Microfilms no. 64-4313, Ann Arbor, Mich.

352. Forrester, G., Occupational Literature, Wilson, 1964, 675 pp.

An annotated bibliography, 1964 edition.

353. Foytick, J. J., "Teacher-Lesson Organization Plan," Industrial Arts & Vocational Education, June 1965, 54:38

354. Frantz, W. M., "Education and Industry: Mutual-Aid Program," Teachers College J., November 1964, 36:70-3

355. Fraser, C. E., "Four Phase Curriculum for Farm Related Occupations," Agricultural Education Magazine, January 1965, 37:174-5

356. Frayne, J. G., "Training Motion-Picture and Television Technicians for the Decades Ahead," Soc. of Motion Picture and Television Engineers J., September 1962, 71:641-2

357. Freedman, M. K. (N. Y. Univ.) "A Study of the Vocational Behavior of a Group of Academic Early School-Leavers in Brooklyn," N. Y. Univ., 1962, 151 pp.
Order U. Microfilms no. 63-5344, Ann Arbor, Mich.

This study explored the first year of work experience of 91 early school-leavers.

358. Friedman, C. H. (Columbia Univ.) "An Economic Analysis of the Origins and Effects of the Preparation Pay Differentials for New York City Teachers," Columbia Univ., 1962, 378 pp.
Order U. Microfilms no. 62-4229, Ann Arbor, Mich.

The preparation pay plan for New York City public shool teachers is viewed as a case study in human capital investment. The approach is consistent with the plan's avowed aims to improve teachers' educational preparation, and base their salary differences on preparation differences.

359. Friedman, N. L. and W. Vassalotti, "Improving Interest in Related Information," Industrial Arts & Vocational Education, October 1964, 53:31

360. Fuglsby, G. O. (Iowa State Univ. of Sci. and Tech.) "Occupational Patterns in Four Northwest Iowa Counties," Iowa State Univ. of Sci. and Tech., 1965, 138 pp.
Order U. Microfilms no. 65-12,473, Ann Arbor, Mich.

This study discusses employment needs, present and future, and how educational institutions can guide students to fill prospective positions.

361. Fuller, G. R. (Cornell Univ.) "The Relationship of Characteristics of the Prospective Student Teachers and Student Teaching Effectiveness in Agricultural Education," Cornell Univ., 1963, 411 pp.
Order U. Microfilms no. 64-998, Ann Arbor, Mich.

362. Fulmer, J. L., The Challenge, Training for Jobs, Meeting Technological Change, Increasing the Rate of Economic Growth, Atlanta, Georgia, Georgia Dept. of Labor - Employment Security Agency, 1963, 24 pp.

363. Fulmer, J. L. and R. E. Green, Analysis of Georgia's Technical, Skilled, and Clerical Labor Requirements and Training Needs, 1962 to 1967, Georgia Dept. of Labor, Employment Security Agency, 1963, 80 pp.

364. Fulton, J. F., "Employment Impact of Changing Defense Programs," Monthly Labor Review, May 1964, 87:508-16

365. Fulton, J. F. and R. B. Flanders, "Employment and Occupational Outlook in Electronics," Monthly Labor Review, September 1963, 86:1026-32

366. Gable, J. L., "Advisory Council for Adult Education," Adult Leadership, February 1964, 12:235-6

367. Gabrielson, J. B., "With Jobs, They Find New Dignity," Calif. Teachers Assn. J., May 1965, 61:36-8

368. Gadda, H. W. (Mich. State Univ.) "An Evaluation of the Pre-Service Program of Teacher Education in Agriculture at South Dakota State College," Mich. State Univ., 1963, 245 pp.
Order U. Microfilms no. 64-932, Ann Arbor, Mich.

369. Gaddes, W. H., "Current Influences in the Development of a Concept of Vocational Interest," Personnel & Guidance J., November 1959, 38:201

370. Galbraith, J. K., "Employment, Education, and the Industrial System," Computers and Automation, August 1965, 14:18-21

371. Gallington, R. O., "Case of the Industrial Technologist," Industrial Arts & Vocational Education, June 1964, 53:19-21

372. Gardiner, G. L., "How You Can Get the Job You Want," Harper, 1962, pp. 164-73

373. Gardner, J. W., "From High School to Job," 1960 Annual Report of the Carnegie Corporation of New York, New York, The Corporation, 1961

374. Gast, D. K. and J. B. Barnes, "Survey of Facts and Attitudes Concerning Junior College Offerings in Education in Eighty-Three Western Junior Colleges, January 1962," J. Teacher Education, December 1963, 14:391-8

375. Gates, C. L., Jr. (Florida State Univ.) "A Study of the Administrators of Technical Education Programs in the Public Junior Colleges of the United States," Fla. State Univ., 1964, 162 pp.
Order U. Microfilms no. 65-314, Ann Arbor, Mich.

This study seeks to obtain a profile of the administrators of technical education programs, to identify the places in the administrative structure held by these administrators, to describe the scope of the technical education programs, and to analyze the relationship of characteristics of the administrators to the scope of the programs administered by these persons.

376. Gausman, C. H., "Six-State Regional Agri-Business School," Phi Delta Kappan, 46:381-2

377. Gaza, C. T. (New York Univ.) "The Prediction of Success in Nursing Training: The Use of the Interpersonal System of Multilevel Personality Diagnosis as an Adjunct to the Selection Program of a Hospital School of Nursing," New York Univ., 1963, 142 pp.
Order U. Microfilms no. 63-6662, Ann Arbor, Mich.

This study seeks to predict success in nursing training by use of the Interpersonal System of Multilevel Personality Analysis (tests included: Interpersonal Check List, Minn. Multiphasic Personality Inventory, and TAT) as an adjunct to the usual student screening process. The conclusion was drawn that the Interpersonal System as modified and studied in this investigation failed to provide any information directly relevant to the criterion of grade point average against which it was tested. The discussion of the results points to the necessity for (1) a serious change in the conceptualization of criteria of success in nursing and (2) for the resolution of methodological and statistical difficulties which lie in the way of integrating personality findings of predictive aptitude tests.

378. Genereaux, R. P., "Utilizing the Technician," Chemical Engineering Progress, August 1963, 59:36-7

379. George, W. C. (Univ. of Missouri) "A Study of Farm Mechanics Jobs Taught by Teachers of Vocational Agriculture in Missouri," Univ. of Missouri, 1964, 274 pp.
Order U. Microfilms no. 65-1043, Ann Arbor, Mich.

This study sought to determine what farm mechanics jobs are being taught in the day classes of Missouri high schools with departments of vocational agriculture.

380. Research Design To Forecast Demand for New Types of Technicians in an Industry, Engineering Experiment Station, Georgia Institute of Technology, Atlanta, Office of Manpower and Automation Research; Office of Manpower Automation and Training

381. New on the Horizon, Trade & Industrial Education Service, Vocational-Education Division, Atlanta, Georgia, August 1963, 24 pp.

382. The Challenge of Change for Vocational Education, Georgia State Board of Vocational Education, State Department of Education, Atlanta, 1962

383. Gerlock, D. E. (Fla. State Univ.) "An Analysis of Administrators' Evaluations of Selected Professionally and Provisionally Certificated Secondary School Teachers," Fla. State Univ., 1964, 63 pp.
Order U. Microfilms no. 65-5580, Ann Arbor, Mich.

The purpose of this study was to determine whether there were significant differences, as judged by differences in administrators' ratings, between professionally and provisionally certificated secondary school teachers in the areas of personal qualifications, teaching ability, relationships with others, professional ethics and performance, and moral and social ethics and performance.

384. Giachino, J. W. and R. O. Gallington, "Course Construction in Industrial Arts and Vocational Education" (2nd ed.), American Tech. Soc., 1961

385. Gibson, H. L. (Univ. of Iowa) "The Development of a Business Education Program for the Secondary Schools of Missouri," Univ. of Iowa, 1964, 277 pp.
Order U. Microfilms no. 64-10,993, Ann Arbor, Mich.

This study analyzes present status, aims, objectives and programs of business education in the secondary schools. It discusses needed modifications and additions. Among recommendations cited is the implementation of a core curriculum.

386. Gibson, R. H. (Univ. of Missouri) "Effect of Non-Vocational Loads on Programs of Instruction in Vocational Agriculture in Tennessee," Univ. of Missouri, 1963, 152 pp.
Order U. Microfilms no. 64-1061, Ann Arbor, Mich.

387. Gilpatrick, E. G. (Cornell U.) "Unemployment and Aggregate Demand: A Study of Postwar Employment and Unemployment in the United States, 1948-1962," Cornell Univ., 1964, 425 pp.
Order U. Microfilms no. 65-3125, Ann Arbor, Mich.

The problem considered in this dissertation is whether structural changes in the postwar economy have substantially contributed to the higher unemployment levels since 1955, or whether the major cause was insufficient spending relative to the productive capacity of the labor force.

388. Ginther, R. E., "Analyzing Graduate Programs in Industrial Education," Industrial Arts & Vocational Education, June 1965, 54:19-20

389. Ginzberg, E., et al., Occupational Choice, New York, Columbia University Press, 1951

390. Giordana, E. A. (Mich. State Univ.) "The Effectiveness of the Ferndale, Michigan, Public School Adult Education Program in Enhancing Job Opportunities for School Drop-Outs," Mich. State Univ., 1964, 114 pp.
Order U. Microfilms no. 65-1742, Ann Arbor, Mich.

391. Glaser, R. ed., *Training Research and Education*, Pittsburgh, University of Pittsburgh Press, 1962, 596 pp.

It is the thesis of this book that the process of behavioral modification called training and education should be built upon the findings and consequent technological implications brought about by research in psychological science. Chapters are organized around a systems conception of instruction initiated by a specification of goals. The main input is the entering behavior of the student. In addition to an introduction, there are sections on instructional objectives, individual differences and the design of instructional aids, training of technicians, proficiency measurement, training for multiman systems, new developments in training research and coordination research, and coordination of research and practice.

392. Gleazer, Jr., E. J., "AAJC Approach: A Partnership in Occupational Education," *Junior College J.*, February 1965, 35:4-5

393. Glick, Jr., P., "Preliminary Trial of a Three-Dimensional Classification of Occupations," *J. Counseling Psychology*, Spring 1964, 11:95-7

394. Goddard, M. L. (Ind. Univ.) "The Potential Role of the Junior College in Education for Business," Ind. Univ., 1962, 346 pp.
Order U. Microfilms no. 63-2596, Ann Arbor, Mich.

The problem was a study of the potential role of the junior college in education for business. Specifically, the study was concerned with the nature, scope, depth, and desired end results of junior college education for business.

395. Goldberg, M. H., R. [illegible]. Dawson, and R. S. Barrett, "Comparison of Programmed and Conventional Instruction Methods," *J. of Applied Psychology*, 1964, Vol. 48, No. 2, pp. 110-14

The study, undertaken in an industrial setting, compared a conventional instruction method (lecture-discussion) with two different methods of programmed instruction (programmed text and teaching machine). Comparable groups of clerical employees were instructed in descriptive statistics under the three different instruction methods. Achievements and motivational effect were assessed at the conclusion of the course and again six months later. Although there was no significant difference in achievement test scores of the three groups upon completion of the course, the retention of information after six months was greatest for the group taught by conventional instruction method. Both programmed instruction methods provided a substantial saving in training time.

396. Goldstein, H., "BLS Occupational Trend Projections; an Appraisal," Monthly Labor Review, October 1963, 86:1135-8

397. Goldstein, S., The Norristown Study, Philadelphia, University of Pennsylvania Press, 1961, 366 pp.

Progress report on a long-term, interdisciplinary research program conducted by the University of Pennsylvania, covering numerous studies on social adjustments to technological change. Subjects include worker mobility, readjustment of unemployed workers within the community, changing attitudes of workers, and the changing job structure. Research methods involve household enumeration, case studies, and historical research.

398. Goodman, E. H., ed., "Effects of Computers on Personnel," Data Processing, Part I, November 1961, pp. 8-24; Part II, December 1961, pp. 17-24

A roundtable discussion by educators, employer and union representatives, consultants, and others. Part I considers displacement, psychological reactions, and job opportunities. Part II is primarily concerned with skill requirements, education, training, and social responsibilities.

399. Goodwin, R. C., Labour Force Adjustment of Workers Affected by Technological Change, Paris, printed in Washington, D.C., O.E.C.D., Social Affairs Division, December 8-10, 1964, 26 pp.

North American Joint Conference on the Requirements of Automated Jobs and Their Policy Implications, Washington, D.C., Part C - Facilitating Worker Adjustment to Technological Change, Report No. 12.

400. Gordon, L. V. and E. F. Alf, "The Predictive Validity of Measured Interest for Navy Vocational Training," J. Applied Psychology, 1962, 46:212-219

An experimental interest test, yielding scores on 5 homogeneous scales, was administered to a sample of recruits on their 3rd day in the Navy. Recruits were assigned to Naval school training, on the basis of expressed interest and aptitude test scores, by classification personnel who did not have access to interest test scores. Follow-up results are reported for 19,147 recruits assigned to 51 schools, each of which had a related scale on the interest test. For the students in each of the 51 schools, the mean score on the related interest scale was significantly higher than the corresponding mean score for the general recruit population. For 41 schools the related interest scales had statistically significant predictive validity against a school grade criterion. Related interest scales contributed significantly to operational aptitude tests in predicting school success.

401. Goshen, E. E., "Training Before Entrance to the Labor Market," School Shop, June 1963, 22:15-16

402. Gothberg, J. A. (Stanford Univ.) "The Junior College Journalism Curriculum," Stanford Univ., 1963, 179 pp.
Order U. Microfilms no. 64-5561, Ann Arbor, Mich.

The principal purpose of this study was to compare selected junior college terminal and transfer programs in journalism with the needs and requirements as judged by students, employers, and college journalism professors.

403. Gould, J. R., Opportunities in Technical Writing, New York, Vocational Guidance Manuals, 1965, 160 pp.

404. Grabbe, E. M., "Skills Will Shift from Manual to Mental; Racing Technology Has Reshaped Look of Jobs To Come," Iron Age, February 4, 1965, 195:54

405. Gray, A. W., "Knowledge and Skills Available upon Re-Employment," J. Audio Engineering Soc., May 1963, 47:34

406. Green, A. L. (Univ. of Fla.) "The Relative Effectiveness of Two Methods of Vocational Exploration with High School Students," Univ. of Fla., 1963, 72 pp.
Order U. Microfilms no. 64-5606, Ann Arbor, Mich.

Method one was in intensified vocational counseling program including six weeks of group guidance, in which school counselors assumed the primary responsibility but were assisted by classroom teachers. Method two was a program of vocational guidance centered in units of work offered periodically as a part of the classroom curriculum. In this program teachers assumed primary responsibility but were assisted by counselors.

407. Greene, J. H. (N. Y. Univ.) "The Business Arithmetic Competencies Needed by the Junior College Business Graduate in Georgia," N. Y. Univ., 1963, 244 pp. Order U. Microfilms no. 63-6690, Ann Arbor, Mich.

This study was prompted by the limited ability of the college student to properly handle the arithmetic of business situations and the removal of courses in business arithmetic from the curricula of many colleges and universities. Studied are two questions: Why was business arithmetic removed from the course work by the schools, and could it be that the businessmen no longer had a need for nor an interest in their employees having such skills?

408. Greer, T. V. and R. C. Maddox, "Exploration into Occupational Prestige," Personnel J., April 1965, 44:204-6

409. Gribbons, W. D., "Changes in Readiness for Vocational Planning from the Eighth to the Tenth Grade," Personnel and Guidance J., 1964, Vol. 42, No. 9, pp. 908-13

This paper reports on the first two years of a longitudinal career development study of 110 boys and girls. This first section has been concerned mainly with the ability of 8th- and 10th-grade boys and girls to deal with educational and vocational decisions. Using a logically derived interview schedule and scoring manual, it was found that there was a significant change in ability to deal with the 8 variables that were considered to be measures of readiness for vocational planning; subjects increased in their awareness of interests and values and their relation to occupational decisions, were more willing to take responsibility for their decisions, and continued to increase in both awareness and accuracy of appraisal of ability. Also, more factors were considered when making educational-vocational decisions. It was noted that even in the 10th grade many subjects were behaving in a manner that would indicate they had made decisions and would make future decisions based on information that is irrelevant and often inaccurate. There were, however, a good many students in the 8th grade who were more advanced, more ready to make vocational decisions than were some 10th-grade students. For some students, at least, it would seem not to be necessary to delay curriculum choices as has been advocated by many vocational psychologists.

410. Gribbons, W. D. and P. R. Lohnes, "Relationships Among Measures of Readiness for Vocational Planning," J. of Counseling Psychology, 1964, Vol. 11, No. 1, pp. 13-19

As the first steps in a 10-year longitudinal study of career development, a multidimensional personal interview was administered to the same group of 110 boys and girls when they were in the 8th and the 10th grades. The analysis of internal correlations within the 1958 (8th grade) and 1961 (10th grade) Readiness for Vocational Planning (RVP) scales scores established the multivariate nature of the behavioral domain. The 1961 responses were less homogeneous than those of 1958, and less dependent on verbal ability, which would seem to indicate that the responses were more discriminative at the more mature age. Sex differences in RVP did not dictate a separation of the sexes in the various analyses, although it was evident that with a much larger sample such separation would be required. RVP was not appreciably related to socioeconomic level of family, but was related to socioeconomic level of occupational choices.

411. Gribbons, W. D. and P. R. Lohnes, "Validation of Vocational Planning Interview Scales," J. of Counseling Psychology, 1964, Vol. 11, No. 1, pp. 20-5

The multidimensional personal interview administered to the same group of 110 boys and girls in the 8th and 10th grades has demonstrated, under statistical analysis, its ability to separate these boys and girls into three curriculum groupings, and to predict with some validity as early as the 8th grade the curriculum in which a youngster will be in high school. Although there is a good deal of similarity among the curriculum groups, the college preparatory group consistently demonstrated the highest Readiness for Vocational Planning (RVP) as measured by this instrument. The discriminant analyses indicate that the ability to estimate accurately one's scholastic abilities and to cite the rationale for these estimates appear to distinguish those students in the college preparatory and to indicate higher RVP as measured by this instrument.

412. Griend, M. V., "Occupational Training in Home Services," Calif. Education, January 1965, 2:21-2

413. Griffin, W. L., "Agricultural Workers Needed in Missouri," Agricultural Education Magazine, August 1964, 37:53

414. Griffin, W. L. (Univ. of Missouri) "The Nature of Agricultural Occupations, Other than Farming, in Saline County, Missouri," Univ. of Missouri, 1964, 392 pp.
Order U. Microfilms no. 64-9354, Ann Arbor, Mich.

This study sought to determine the present and emerging agricultural occupations other than farming, and the competencies and prerequisites needed by an individual to enter and advance in those occupations found in Saline County, Missouri. Also, the number of graduates of vocational agriculture of Saline County high schools who had entered and were still employed in agricultural occupations other than farming was determined.

415. Groneman, C. H., "Basic Patterns of Industrial Technology Programs," Industrial Arts and Vocational Education, June 1964, 53:16-18

416. Groneman, C. H., "Supplementary Teaching Materials for Industrial Education," Industrial Arts & Vocational Education, September 1965, 54:70; October 1965, 54:64; November 1965, 54:59-60

417. Groom, P., "Digest of 1961 State Reports on Vocational Education," Monthly Labor Rev., October 1963, 86:1162-5

418. Grossman, A., "Help Before They Drop Out," Michigan Education J., November 1965, 43:19

419. Grote, C. N. and C. M. Hackler, "Selected Problem Areas with Implications for Action Research," American Council Industrial Arts Teacher Education Yearbook, 1964, 13:123-50

420. Grubb, J. W. (Ohio Univ.) "An Experimental Study of the Influence of a Set of Programmed Materials on Vocational Values," Ohio Univ., 1965, 348 pp.
Order U. Microfilms no. 65-3911, Ann Arbor, Mich.

The purpose of the study is to determine whether the measured vocational values of a group of 11th and 12th grade students who have used Values and Choices are significantly different from the measured vocational values of a comparable control who have not used same. Values and Choices is a programmed textbook which was developed for the study, which is concerned with certain aspects of career planning, and which is potentially an instrument that could be used for vocational guidance purposes.

421. Guditus, C. W. (Lehigh Univ.) "Guidelines for the Area Vocational (Technical) School in Pennsylvania," Lehigh Univ., 1965, 164 pp.
Order U. Microfilms no. 65-11,301, Ann Arbor, Mich.

This study seeks to develop a rationale for the area vocational (technical) school.

422. Guilford, J. P., "Preparation of Item Scores for the Correlations Between Persons in a Q-Factor Analysis," Educational and Psychological Measurement, 1963, 23:13-22

423. Guy, H., "Research in Business Education Completed or Under Way in 1963," National Business Education Quarterly, March 1964, 32:39-57

424. Guy, H., "Research in Business Education Completed or Under Way in 1964," National Business Education Quarterly, March 1965, 33:37-60

425. Haber, W., L. A. Ferman, and J. R. Hudson, The Impact of Technological Change: The American Experience, Kalamazoo, Mich., W. E. Upjohn Institute for Employment Research, September 1963, 62 pp.

426. Haden, G. N., et al., "More Student Apprentices in Building Services," Engineering, October 5, 1962, 194:448

427. Haga, E. J., "Understanding Automation," J. Business Education, April 1965, 40:302-3

This article presents a data processing curriculum guide and reference text.

428. Hagen, D. E. and L. Sharp, "Manpower Training Courses for Dairy Workers," Agricultural Education Magazine, July 1964, 37:18-19

429. Hahn, R. C., "Timken's Experience with Programed Teaching," Plant Engineering, June 1965, 19:136-8

430. Haines, P. G. and H. H. Tedder, Distributive Education Training Guides: 100 Ways To Learn Your Job by Putting the Theory into Practice, Cincinnati, Ohio, South-western Publishing Co., 1963, 202 pp.

431. Hall, G., "Home Economics, Forerunner for the Future," Practical Forecast, May 1965, 10:25

432. Hall, H. O. (Univ. of Fla.) "Effectiveness of Fully Certified and Provisionally Certified First-Year Teachers in Teaching Certain Fundamental Skills," Univ. of Fla., 1962, 122 pp.
Order U. Microfilms no. 62-3937, Ann Arbor, Mich.

433. Hall, R. E. (Univ. of Minnesota) "The Place of Textiles and Clothing in the Required Curriculum and in Selecting Specializations in Home Economics," Univ. of Minn., 1964, 328 pp.
Order U. Microfilms no. 64-10,824, Ann Arbor, Mich.

This study seeks to suggest potential contributions of textiles and clothing courses to the general and professional education of all home economics students, and to those majoring in textiles and clothing and in home economics education. The study was designed to explore what should constitute the program by examining the objectives of administrators, faculty, and students of home economics.

434. Haller, A. O. and I. W. Miller, Occupational Aspiration Scale: Theory, Structure, and Correlates of an Instrument Designed to Measure Differential Levels of Occupational Aspiration, East Lansing, Mich., Michigan State Univ., 1961

Final report of a study of the relation of occupational aspiration to educational, social, and psychological factors.

435. Halterman, J. J., "Three Curricula for Training Agricultural Technicians at Modesto Junior College," Agricultural Education Magazine, November 1963, 36:106-8

436. Halterman, J. J. (Ohio State Univ.) "Determination of the Educational Needs of Agricultural Engineering Technicians in Ohio," Ohio State Univ., 1964, 247 pp.
Order U. Microfilms no. 65-5642, Ann Arbor, Mich.

This study undertook to determine the important characteristics and attributes of the agricultural engineering manpower force of the state, to determine the kinds of activities technicians engage in on the job and the technical competency essential for satisfactory performance, and to develop suggested curricula for use in the preparation of agricultural engineering technicians.

437. Hameduddin, S., "Work-Study Attracts Students," Public Management, August 1965, 47:204-5

438. Hamel, H. R., "Employment of School Age Youth," Monthly Labor Rev., July 1964, 37:767-73

439. Hamel, H. R., "Labor Force Status of Youth, 1964," Monthly Labor Rev., August 1965, 88:932-7

440. Hamlin, H. M., "New Designs in Vocational and Practical Arts Education: The South," American Vocational J., December 1964, 39:12-15

441. Hammerman, H., Implications of Automation for Business Education, Paper presented before the Workshop on Automation and Business Education at the convention of the United Business Schools Association, Washington, D.C., November 1, 1962
Order U.S. Dept. of Labor, Bureau of Labor Statistics, Washington, 1962, 12 pp.

Status of office automation and implications for levels of office employment, office occupations, and management training. Finds a growing need for training and retraining in business and subjects and in data processing.

442. Hansen, M. E. (Colo. State Coll.) "Industrial Technology and the Engineering Withdrawal," Colo. State Coll., 1964, 230 pp.
Order U. Microfilms no. 64-8524, Ann Arbor, Mich.

The purpose of this study was to determine the extent of the need for degree curricula in industrial technology at the University of Nebraska.

443. Hanson, C., "European Methods of Training Technologists for the Chemical Industry," Chemistry and Industry, May 15, 1965, 838:41

444. Harbison, F. H. and C. A. Myers, Education, Manpower, and Economic Growth; Strategies of Human Resource Development, New York, McGraw-Hill, 1964, 229 pp.

445. Hardin, E., W. B. Eddy, and S. E. Deutsch, Economic and Social Implications of Automation, East Lansing, Michigan State University, 1961, 78 pp.

Annotated bibliography on literature published during the period 1957-60 on economic and social implications of automation. References cover subjects such as employment, skill requirements, training, labor-management relations, and the administration of change.

446. Harding, F. D. and D. A. Naurath, "Effects of Job Experience and Organization on the Rating of Tasks," Eng. Ind. Psych., 1960, 2:63-8

With the expanding use of automated equipment, efficient methods of collecting information about rapidly changing jobs are needed. A card-sort method is explained, including the need for further improvements. Caution should be exercised in grouping pieces of job information from different departments or from widely different types of workers.

447. Hardman, W. E., "Training from Scratch; NTDPMA's Apprentice Training Program," American Machinist, June 21, 1965, 109:98-9

448. Harris, N. C., "Technical Education in the Junior College: New Programs for New Jobs," American Assn. of Junior Colleges, 1964, 102 pp.

449. Harris, N.C., "Testimony on the Technical Education Act of 1962 (H.R. 10396)" Hearings before the Special Subcommittee on Education, House Committee on Education and Labor, June 1, 1962, Washington, American Council on Education, 1962

450. Harris, N. C., "Major Issues in Junior College Technical Education," *Educational Record*, Spring 1964, 45:128-38

451. Harris, N. C., "The Community Junior College, A Solution to the Skilled Manpower Problem," G. K. Smith, ed., *Higher Education in an Age of Revolution*, Washington, Assn. for Higher Education, National Education Assn, 1962

452. Harris, N. C., "Meeting the Post-High School Educational Needs of the Vast 'Middle Group' of High School Graduates," Presentation to the Committee on Articulation of Schools and Colleges, North Central Assn. of Colleges and Secondary Schools, Chicago, March 19, 1963

453. Harris, N. C., "A Suggested Core Curriculum for Junior and Community College Technical Education," *Technical Education News*, April 1963, Vol. 23

454. Harrison, G. F., "Reaching the Disadvantaged in Homemaking Education?" *American Vocational J.*, November 1964, 39:27-8

455. Hartley, H. W., "Engineering Technicians in the Space Sciences," *Technical Education News*, December 1963, Vol. 23

456. Haskew, L. D. and I. W. Tumlin, "Vocational Education in the Curriculum of the Common School," *National Social Study Education Yearbook 1964*, 1965, 1:64-87

457. Hass, C. W., "Industry and Education Combine Talents To Provide Banking Kit for Teachers," *Calif. Education*, April 1964, 1:23-4

458. Hatalsan, J. W. (Univ. of Calif., Los Angeles) "A Follow-Up Study of San Diego Apprentice Graduates, 1947-55, Providing Information for Guidance and Counseling Use in Secondary Schools," Univ. of Calif., 1963, 299 pp.
Order U. Microfilms no. 63-7880, Ann Arbor, Mich.

The purpose of the study was to provide information about personal characteristics, occupational progress, economic status, educational activities, and labor, management, and professional organization activities of apprentices after completion of their apprenticeship training.

459. Hatcher, H. M. and M. E. Andrews, *The Teaching of Home Economics* (2nd Ed.) Boston, Houghton Mifflin, 1963, 486 pp.

460. Haweeli, N. (Columbia Univ.) "An Inquiry into the Functions and Administration of Boards of Cooperative Educational Services in the State of New York with Proposals for Their Improvement," Columbia Univ., 1964, 117 pp.
Order U. Microfilms no. 65-4732, Ann Arbor, Mich.

This thesis deals with the problems which inhibit the realization of the full potential of cooperative boards. Suggested improvements are discussed and recommendations are made which are designed to further the efficiency and effectiveness of cooperative educational ventures insofar as these depend upon the administration and functions of Boards of Cooperative Educational Services.

461. Hawes, B. W. V., "Chemical Technician's Certificate," Chemistry & Industry, January 18, 1964, pp. 91-2

462. Hawse, J. E. (Colo. State Coll.) "An Analysis of Industrial Arts Objectives as Determined by Opinions of Selected Population Groups," Colo. State Coll., 1964, 169 pp.
Order U. Microfilms no. 65-234, Ann Arbor, Mich.

This study undertakes to identify those population groups which are vitally interested in the education of our youth and to ascertain from them through the use of an opinionaire, how much and where emphasis should be placed. Groups studied included industrial arts teacher educators, industrial arts teachers, administrators, industrial employment officers and parents (all of Illinois). The findings were analyzed and compared with other recent findings.

463. Hayles, Jr., J. A. (La. State Univ.) "Occupational Experiences of High School Graduates Who Completed Four Years of Vocational Agriculture in Louisiana," La. State Univ., 1963, 178 pp.
Order U. Microfilms no. 64-145, Ann Arbor, Mich.

464. Heald, J. E., "How To Control Teacher Recruitment," School Management, June 1964, 8:102-4

465. Hecht, J. C. (N. Y. Univ.) "A Follow-Up Study of High School Graduates of Three Retailing Programs," N. Y. Univ., 1963, 212 pp.
Order U. Microfilms no. 64-282, Ann Arbor, Mich.

466. Heck, J. B., Eighty Sources of Occupational Information, Ohio Dept. of Education, Div. of Guidance and Testing, 1963, 13 pp.

467. Heilman, D. E. (Univ. of Washington) "The Development of a Curriculum for Professional Preparation of Industrial Arts Teachers," Univ. of Washington, 1963, 210 pp.
Order U. Microfilms no. 64-4506, Ann Arbor, Mich.

468. Heineman, D. A., "Ohio's Mahoning Valley Vocational School," *Employment Service Rev*., May 1965, Vol. 2, No. 5, pp. 31-2

469. Heller, W. W., "Men, Money, and Materials," *Educational Record*, January 1963, 44:12-16

470. Henderson, C. E. and R. E. Lucas, "Vocational Agriculture Should Begin in the Freshman Year; Juniors and Seniors Are Ready for Specialized Study," *Agricultural Education Magazine*, April 1965, 37:246-8

471 Henderson, J. M. and A. O. Krueger, *National Growth and Economic Change in the Upper Midwest*, Minneapolis, Univ. of Minnesota Press, 1965

472. Henninger, G. R., *The Technical Institute in America*, New York, McGraw-Hill Book Co., 1959

473. Henninger, G. R., "Technicians: Answer to the Shortage of Engineers," *Product Engineering*, March 14, 1960, Vol. 31

474. Herson, P., "Personal and Sociological Variables Associated with the Occupational Choices of Negro Youth: Some Implications for Guidance," *J. Negro Education*, Spring 1965, 34:147-51

475. Hickman, J., "Workshops for Industrial Arts Teachers," *Industrial Arts & Vocational Education*, October 1963, 52:23

476. Hines, J. J., "Industry Needs High School Graduates," *American School Board J.*, October 1964, 149:13-14

477. Hinrichs, R. St. A. (Univ. of Missouri) "Need for Technical Education in the New Orleans Area with Implications for the Delgado Technical Institute," Univ. of Missouri, 1964, 151 pp.
Order U. Microfilms no. 64-9355, Ann Arbor, Mich.

The purpose of this study was to examine the need for technical education in the New Orleans area and to determine how the Delgado Technical Institute should be implemented to fulfill this need.

478. Hoch, O., "Dropout Syndrome," *High School J.*, November 1965, 49:98-106

479. Hodges, L. H., "Filling Needs for Voc-Ed Leaders," Mich. Education J., November 1965, 43:14-15

480. Hofer, A. G., "Teaching Manipulative Operations with Programed Materials," Industrial Arts & Vocational Education, October 1964, 53:49-51

481. Hofer, A. G. (Univ. of Missouri) "An Experimental Comparison of Self-Instructional Materials and Demonstrations in the Teaching of Manipulative Operations in Industrial Arts," Univ. of Missouri, 1963, 465 pp.
Order U. Microfilms no. 64-4808, Ann Arbor, Mich.

This study ascertained the relative effectiveness of self-instructional materials in the form of photographs and printed instruction in booklet form and demonstrations in the teaching of manipulative tasks in industrial arts. Findings indicated that there is no significant difference in the amount of terminology and knowledge of procedure learned and retained nor in the quality of performance. Self-instructional methods were found to require significantly less individual assistance when performing the manipulative operations, but they require slightly more student time for learning with significantly more time for students of lower level intelligence and reading ability.

482. Hoffman, S. (Yeshiva Univ.) "Occupational Preferences and Personality: A Study of Personality Needs Associated with Occupational Aspiration Group and Level," Yeshiva Univ., 1963, 147 pp.
Order U. Microfilms no. 64-6370, Ann Arbor, Mich.

483. Holland, S. S., "Labor Force and Employment in 1963," Monthly Labor Rev., June 1964, 87:645-52

484. Hoos, I.R., "The Personnel Administration and Technological Change," Industrial Relations, May 1963, Vol. 2, No. 3

485. Hopkins, H. D., "Adult Education Through Proprietary Schools," Handbook of Adult Education in the United States, Chicago, Adult Education Assn. of the U.S.A., 1960, pp. 339-44

486. Hoppock, R., Occupational Information: Where To Get It and How To Use It in Counseling and Teaching (2nd ed.), New York, McGraw-Hill, 1963, 546 pp.

487. Hoppock, R., "Best Books of 1963 on Vocational Guidance," National Assn. of Secondary School Principals Bull., September 1964, 48:48-53

488. Hoppock, R., "Best Books of 1964 on Vocational Guidance," National Assn. of Secondary School Principals Bull., April 1965, 49:95-104

489. Horner, J. T., "Establishing Vocational Technical Schools," Agricultural Education Magazine, August 1965, 38:38-9

490. Hostetler, I., "Today's Industrial-Arts Teaching Lags Behind the Need of Today's World," School Shop, September 1963, 23:13-14

491. Howard, J., "Neighborhood Youth Corps," National Assn. of Secondary School Principals Bull., January 1965, 49:97-102

492. Howe, T. G. (Iowa State Univ. of Sci. and Tech.) "Pilot Study of Vocational-Technical Education in Twelve North Iowa Counties," Iowa State Univ. of Sci. and Tech., 1963, 196 pp.
Order U. Microfilms no. 63-5184, Ann Arbor, Mich.

The primary concern of this study was to serve as a pilot study to determine the need for and interest in vocational-technical education. Additional objectives were to explore the extent to which students would be willing to participate in area vocational programs; to obtain current opinions from former students concerning the adequacy of their high school program; to determine the preparatory vocational programs needed in secondary schools and the technical training needed by high school graduates; to gather data on dropouts and determine their need and desire for training; to determine post-high school educational needs of adults; to classify respondents' present occupations and to study employment and migration.

493. Hoyt, K. B., "New Challenges for Guidance in Vocational Education," National Assn. of Secondary School Principals Bull., May 1965, 49:133-41

494. Hoyt, K. B., "The Specialty Oriented Student," Vocational Guidance Quarterly, 1963, Vol. 11, No. 3, pp. 193-8

School Guidance counselors fail to provide much help for this (noncollege-bound) student; the school guidance movement is a tenuous ground if help is primarily given only to college-bound youth. Part of the explanation for this is the relative lack of information about both appraisal procedures and environmental opportunities required to help such students in the decision process. Wider use of the General Aptitude Test Battery is indicated; hopeful results may also be expected from the new Clark Minnesota Vocational Interest Inventory. No similarly promising indications are seen regarding environmental information for these students.

495. Hoyt, K. B. and L. W. Cochran, "Communicating Guidance Information to Specialty Oriented Students," *Audiovisual Instruction*, January 1965, 10:49-53

496. Huffman, H., "Responsibilities of the State Department of Education for the Administration and Supervision of Business Education," National Business Education Quarterly, May 1963, 31:12-19

497. Huffman, H., "Programmed Instruction in Business Education," *National Business Education Yearbook*, 1964, 2:73-94

This article includes a bibliography.

498. Hughes, E. W., "Transition from School to Industry and Further Education," *International Rev. Ed*., 1965, Vol. 11, No. 3, pp. 337-49

499. Hultgren, R. D., "Teach Instrumentation by Wet Process," *Hydrocarbon Processing and Petroleum Refiner*, March 1965, 44:167-70

500. *Human Resources Research Office Work Program: Fiscal Year 1964*, Washington, D.C., Human Resources Research Office, 1963, 86 pp.

Most of the year's research and development will deal with training for the use and maintenance of complex equipment. Indoctrination and training of the new soldier will be stressed more, as will language and remote-area training and operations. 34 specific tasks for 1964 are outlined in six work categories.

501. *The Nature of Automated Jobs and Their Educational and Training Requirements*, Arlington, Va., Human Sciences Research, Inc., Office of Manpower and Automation Research

502. Hunter, E. M. (Univ. of Missouri) "Need for, Interest in, and Means of Supporting an Area Vocational School To Serve Miller, Moniteau, and Morgan Counties in Missouri," Univ. of Missouri, 1963, 232 pp.
Order U. Microfilms no. 64-4809, Ann Arbor, Mich.

503. Hurt, M. L., "Educating for the World of Work; A Team Approach," *Educational Leadership*, January 1965, 22:221-5

504. Hurt, M. L., "Expanded Research Programs Under Vocational Education," *J. Home Economics*, March 1965, 57:173-5

505. Industrial Arts Curriculum Planning Guide, Grades 7-12, Boise, Idaho, Idaho State Dept. of Education, Div. of Instruction, 1964, 129 pp.

506. Occuational Guide, Furniture Finisher, Boise, Idaho, Employment Security Agency, State of Idaho, 1961, 2 pp.

Discusses the nature of the work, working conditions, wages, and fringe benefits, advancement opportunities, employment prospects, and entry requirements.

507. Iffert, R. E., Retention and Withdrawal of College Students, Washington, Government Printing Office, U.S. Dept. of Health, Education and Welfare, 1957
Order FS5.3:958/1

508. Governor's Conference on Youth Employment, State of Illinois, Report of June 5-6, 1962, meeting.

509. "Facts About the Distributive Education Programs in Illinois Conducted by Your Local Board of Education in Cooperation with the Business and Distributive Education Service," State Board of Education, Board of Vocational Education Bull., 1959, No. 168, 20 pp.

510 "Essentials and Requirements of a Vocational Trade and Industrial Program," Illinois Board of Vocational Education Bull. No. 173, Ser. B, 1960, 12 pp.

511. "Minimum Essentials and Requirements of a Distributive Education Program," Illinois Board of Vocational Education Bull. No. 174, Ser. B, 1960

512. "Trade and Industrial Education in Illinois," Springfield, Illinois Board of Vocational Education Bull. No. 189, Ser. B, 1963, 22 pp.

513. Business Education in the Secondary School, Springfield,Ill., Office of the Superintendent of Public Instruction, 1963, 187 pp.

514. Post-Entry Training in the Local Public Service, with Special Reference to Administrative, Professional, and Technical Personnel in the United States, Chicago, International Assn. of City Managers, 1963, 82 pp.

515. The Acceleration of Technological Progress and Its Influence on the Effective Utilisation of Manpower and the Improvement of Workers' Income, Geneva, International Labour Organisation, Metal Trades Committee, 1962, 122 pp.

Discusses types of technological changes occurring in metalworking industry, e.g., machine tools, shipbuilding, foundry, and aerospace. Considers influence of research and development and new management techniques. Impact of change on workers is considered in terms of man-machine relationships, job enlargement, shift working, qualifications and skill requirements, education and training, measures to alleviate burden of displacement on workers; and the impact on incomes.

516. Education Beyond High-School Age, The Community College, Des Moines, State of Iowa, Dept. of Public Instruction, 1962

517. Ivey, A. E., "Interests and Work Values," Vocational Guidance Quarterly, 1963, Vol. 11, No. 2, pp. 121-4

The Work-Values Inventory (WVI), developed by Super for use in the Career Pattern Study, plus the Kuder Preference Record (Vocational) was administered to a sample of 85 education freshmen at Boston University in the fall of 1958. (The WVI is unpublished and consists of 15 scales measuring values found in work such as planning, theoretical, variety, esthetic, mastery, etc.) For the most part, these two inventories were not found to correlate highly. At least in this sample, the fields in which a person is interested seem to be relatively unrelated to much of what he values and holds important in his work or career.

518. Jackson, R. O., "Vocational Education in a Small High School," National Assn. of Secondary School Principals Bull., May 1965, 49:54-9

519. Jackson, W., "Determination of Priorities in Technical Education," Canadian Education Research Digest, December 1964, 4:246-55

520. Jacobsen, E. A., "Publicity: Projecting Your New Image," J. Industrial Arts Education, September 1964, 24:54

521. Jahrman, Q. K. (Univ. of Arkansas) "Recruiting Prospective Teachers of Industrial Education," Univ. of Arkansas, 1964, 122 pp.
Order U. Microfilms no. 65-1525, Ann Arbor, Mich.

This study seeks to make recommendations for devices and content to be used by a teacher education institution for recruiting students in the area of industrial education.

522. Jakubauskas, E. B., "Retraining: A Problem Created Through Equipment Replacement," Personnel J., November 1963, 42:512-8

This article explains technological change and its effects on employment.

523. James, C. E. (Ariz. State Univ.) "An Analysis of the Effectiveness of Vocational-Industrial Day-Trade Preparatory Programs in Arizona High Schools," Ariz. State Univ., 1963, 267 pp.
Order U. Microfilms no. 64-2183, Ann Arbor, Mich.

Problems studied in this dissertation included the following: Are procedures for selection of vocational-industrial day-trade preparatory students adequate? Were the programs effective in preparing students for their intended vocational-industrial areas? How effective were the placement services provided by the schools? How effective and adequate were follow-up services provided in these programs? Results indicate that selection, placement services, and follow-up services are inefficient and inadequate, whereas students are being adequately prepared for their chosen areas as judged by employer satisfaction.

524. Jantze, M. L. (Univ. of Nebraska Teachers Coll.) "The Work Experience Program in Office Occupations in Selected Institutions of Higher Learning," Univ. of Neb. Teachers Coll., 1965, 191 pp.
Order U. Microfilms no. 65-10,786, Ann Arbor,Mich.

This study undertakes a description and analysis of current practices in selected colleges and universities for carrying on programs of work experience in office occupations. On the basis of the analysis, principles and guidelines for conducting such a program at the undergraduate college level were developed. The colleges studied were National Association for Business Teacher Education members.

525. Jaques, W. T., "Guidance in Career Choice," International J. Religious Education, April 1965, 41:20-1

526. Jenkins, D. J., "Industry and Technical Obsolescence," Mechanical Engineering, April 1964, 86:171-2

527. Jensen, A. R., "The Improvement of Educational Research," Teachers College Record, 1962, Vol. 64, No. 1, pp. 20-7

Why is there so little significant research in education despite the number of educational magazines and the number of doctorates granted? Insufficient money is only symptomatic. It is largely the gulf that exists between education and the systematic study of human behavior, and the sort of people who seek doctorates in education. A remedy is to establish universities, which have departments of educational research apart from the schools of education.

528. Jessee, B. E. (Ariz. State Univ.) "The Effects of Individual Counseling and Group Guidance with Eighth Grade Boys on Their Vocational Maturity the Following Year," Ariz. State Univ., 1963, 213 pp.
Order U. Microfilms no. 64-2184, Ann Arbor, Mich.

529. Johnson, E. L., "Guidelines and Trends in Post-Secondary Vocational-Technical Education with Footnotes on the Junior Colleges," Phi Delta Kappan, April 1965, 46:376-80

530. Johnson, C. E., "Science and Farm Mechanics for Future Teachers," Agricultural Education Magazine, March 1964, 36:198-9

531. Johnson, C. W. (Univ. of Nebraska) "Relationship of Selected Characteristics of Ninth Grade Students to Their Professed or Manifest Occupational Choices," Univ. of Nebraska, 1963, 149 pp.
Order U. Microfilms no. 64-775, Ann Arbor, Mich.

The purpose of the study was to investigate the relationship of certain variables to the occupational choices of 201 former ninth grade students who participated in the 1960 Project Talent survey. Few investigators have been concerned with the relationship of test and non-test factors to educational-vocational counseling in the lower high school grades. An important question was raised: "To what extent can such characteristics be utilized in occupational and educational counseling with ninth grade students?"

532. Johnson, F., "Agriculture and the New Vocational Education Act," Agricultural Education Magazine, July 1965, Vol. 38, No. 1, p. 6

533. Johnson, F. M. (Univ. of Denver) "Industrial Arts Education as a Part of General Education in Colorado Secondary Public Schools," Univ. of Denver, 1963, 228 pp.
Order U. Microfilms no. 64-4165, Ann Arbor, Mich.

534. Johnson, J. T., "Orientation for Work," High Points, June 1965, 47:54-8

535. Johnson, L. B., "President's Manpower Report Notes Role of V.E.," American Vocational J., May 1965, 40:46

536. Johnson, T., "Valley Vocational Center, an Adult School," Calif. Education, September 1965, 3:3-4

537. Johnstone, J. W. E., Volunteers for Learning: A Study of the Educational Pursuits of American Adults, Chicago, National Opinion Research Center, Report No. 89, 1963

538. Jones, A. D., "Data Processing; An Old Shoe with a New Sole," J. Business Education, January 1965, 40:147-8

539. Jones, A. D., "Implications of the Rapidly Developing Computer Technology for Guidance Counselors," J. Business Education, March 1965, 40:239-40

540. Jones, D. E. (Ariz. State Univ.) "Current Programs of Professional Cooperative Engineering Education Between Selected Industries and Institutions of Higher Education," Ariz. State Univ., 1963, 187 pp.
Order U. Microfilms no. 63-3612, Ann Arbor, Mich.

541. Jones, K. J., "Occupational Preference and Social Orientation," Personnel & Guidance J., February 1965, 43:574-9

542. Jones, P. O., "We Train Dropouts in Federal Correctional Institutions," Industrial Arts & Vocational Education, June 1965, 54:26

543. Joseph, J., Careers Outdoors, Nelson, 1962

544. Judge, H. V. (Mich. State Univ.) "Work Experiences of Michigan High School Students of Vocational Agriculture and Their Relation to Occupational and Educational Plans," Mich. State Univ., 1963, 241 pp.
Order U. Microfilms no. 63-6155, Ann Arbor, Mich.

545. Juergenson, E. M. and J. T. Davis, "California Employers Cooperate in Work Experience," Agricultural Education Magazine, August 1964, 37:43-5

546. Kaback, G. R., "Automation, Work, and Leisure: Implications for Elementary Education," Vocational Guidance Quarterly, Spring 1965, 13:202-6

547. Kahl, K. L., "Automation and Teacher Training," Balance Sheet, May 1965, 46:394-6

548. Kahler, A. A. and C. E. Bundy, "Competencies Needed for the Farm Machinery Worker," Agricultural Education Magazine, April 1965, 37:256-7

549. Kaiser, H. F., "Computer Program for Varimax Rotation in Factor Analysis," Educational and Psychological Measurement, 1959, 19:413-20

550. Karnes, Jr., J. W., "Industrial Education," Review of Educational Research, 1962, Vol. 32, No. 4, pp. 402-10

Basic research on learning with industrial arts as a focus has been practically nonexistent until recent years. Continued research on learning as applied to the subject matter of industrial arts shows some promise of being productive. In general, research has been characterized by documentary and descriptive procedures. Considerable research has been done in the psychological areas of learning, interests, and aptitudes.

551. Karnes, M. R., "Technical Education," Review of Educational Research, 1962, Vol. 32, No. 4, pp. 423-32

Technical education has only recently achieved prominence as a major facet of the educational enterprise. Examination of the relationship between education and growth in the total economy represents a new venture in economic research. Caution should be exercised in attempting to evolve a basis for technical education from the research recently conducted by economists. Of the many problems in the field of technical education which demand research effort, that of organization and administrative structure is singled out as the most crucial to the development of this phase of education.

552. Kaufman, W. I., 1001 Top Jobs for High School Graduates, New York, Bantam Books, 1965, 249 pp.

553. Kavieff, M. C., Report of a Survey of the Need for Technicians in the Automotive Manufacturing Industry in the Detroit Metropolitan Area, Publication 3-903, Detroit, Detroit Board of Education, 1962

554. Keller, R. J. et al., Education and Economic Growth: The Next Steps, Minneapolis, Upper Midwest Research and Development Council and the Univ. of Minn., August 1965

This report contains an examination of the role of education in the growth pattern of the upper Midwest. Quality in education is considered at all levels. Changes in educational organization and in educational emphasis are discussed. The need for research and development in the human resource componant of the upper Midwest is emphasized. Action recommendations are presented.

555. Keller, W. D. (Colo. State Coll.) "A Comparison of Teachers' and Educators' Opinions Regarding the Most Beneficial Master's Degree Program for Business Teachers," (Research Study No. 1) Colo. State Univ., 1965, 453 pp.
Order U. Microfilms no. 65-10,018, Ann Arbor, Mich.

556. Kendall, M., "Those Who Failed; Occupation and Income," University Quarterly, December 1964, 19:69-77

557. Kennedy, J., "Programs for Students with Special Needs," National Assn. of Secondary School Principals Bull., December 1964, 48:38-44

558. Vocational, Industrial, and Technical Education, Frankfort, Kentucky State Dept. of Education

559. Kerr, C. et al., Industrialism and Industrial Man: The Problems of Labor and Management in Economic Growth (2nd ed.) New York, Oxford University Press, 1964, 263 pp.

560. Kerwood, R. V., "Community Study Assists in Adjusting to Urbanization; Jackson County, W. Va.," Agricultural Education Magazine, April 1965, 37:248-50

561. Ketcham, Jr., G. W. (Univ. of Conn.) "The Specialization Factors in Connecticut Public High School Industrial Arts Programs," Univ. of Conn., 1963, 143 pp.
Order U. Microfilms no. 64-3541, Ann Arbor, Mich.

The primary purpose of this study was to identify the significant specialization factors, to examine reactions of educators regarding industrial arts programs, and to discover changes which should be made in the industrial arts pattern.

562. Kigin, D. J., "Audio-Visuals in Industrial Arts," J. Industrial Arts Education, May 1964, 23:44-5

563. King, C. R., "Visiting Homemaker Services: Oklahoma Project," American Vocational J., April 1965, 40:27-8

564. King, D. C. and H. N. Rude, "Implications of Interest Patterns for Vocational Counseling and Retraining Programs," Personnel J., December 1964, 43:610-6

565. King, S. W. compiler, Preparatory Trade and Industrial Training Programs in Public Schools; A Directory, 1961-62, USOE Bull. 1963, No. 4, Washington, D.C., U.S. Government Printing Office, U.S. Dept. of Health, Education and Welfare, 1962, 272 pp.

566. Kinker, R. H., "Manpower and Training Act and School Counselors," Teachers College J., May 1964, 35:219-20

567. Kintzer, F. C., "Education of Semiprofessionals Is on the Move," Junior College J., May 1965, 35:19-23

568. Kirby, A. G. (Univ. of Missouri) "Audio-Visual Instructional Needs of a Selected Group of Teachers of Vocational Agriculture in Arkansas," Univ. of Mo., 1963, 159 pp.
Order U. Microfilms no. 64-4812, Ann Arbor, Mich.

569. Klein, R. S. (State Univ. of N. Y., Buffalo) "Curriculum Functions of Lay Advisory Councils in Technical Institutes: An Analysis of Selected Factors Related to Role Theory," State Univ. of N. Y., 1964, 156 pp.
Order U. Microfilms no. 64-13,670, Ann Arbor, Mich.

This study discusses the role of a curriculum advisory council and its relationship with the administration of technical institutes insofar as this affects the functioning and the evaluation of performance of the council. A comprehensive discussion of proposed hypotheses for future investigations aimed to improve the effectiveness of the curriculum advisory council is included in the study.

570. Klingman, J. S. (Univ. of Wis.) "Analysis of Changes in Work Force Composition in Three Selected Companies, 1935-1960," Univ. of Wis., 1964, 367 pp.
Order U. Microfilms no. 64-7088, Ann Arbor, Mich.

571. Knowles, M. C.,"A Review of Labour Turnover Research," Personnel Practice Bull., 1964, Vol. 20, No. 1, pp. 25-37

Research on labor turnover since 1922 is reviewed in four categories: external factors, institutional factors, personal characteristics, and the employee's reaction to his job.

572. Koenig, J. H. and H. M. Carmichael, "Why the 1964 Fluid Power Institute?" Industrial Arts & Vocational Education, October 1964, 53:58

573. Kohler, M. C., Youth in the World of Work, New York, Taconic Foundation, 1962

574. Kohler, M. C., Excluded Youth: Idle or Trained?, Washington, Washington Center for Metropolitan Studies Public Service Leaflet, 1962

575. Koziara, E. C. (Univ. of Wis.) "Employer Views and Evaluations of Federal Retraining Programs," Univ. of Wis., 1965, 305 pp.
Order U. Microfilms no. 65-10,630, Ann Arbor, Mich.

576. Kramer, E. G., "Industrial Education's Two Parts: Trade and Technical Education, Industrial Arts," Calif. Education, June 1965, 2:5-6

577. Kranzberg, M., "Technology and Culture: Dimensions for Exploration," J. Industrial Arts Education, May 1964, 23:25-8

578. Krasteff, K., "Challenge and Fascination of Automation," School and Community, October 1964, 51:16-17

579. Kreitlow, B. W., "Unemployment, Forget It!" Adult Education, Spring 1965, 15:161-3

580. Kreitlow, B. W., "Needed Research," Review of Educational Research, June 1965, 35:240-5

581. Krippner, S., "Occupational Experiences and Vocational Preferences," Peabody J. Education, March 1965, 42:304-9

582. Krippner, S. (Kent State Univ.) "The Occupational Experiences and Vocational Preferences of 351 Upper-Middle Class Junior High School Pupils," Vocational Guidance Quarterly, 1962, Vol. 10, No. 3, pp. 167-70

Data on part-time work experiences and career goals were obtained from 189 boys and 162 girls in 7th and 8th grade classes of an upper-middle class Chicago suburban school system. Boys (53%) report significantly more part-time work experiences than do girls (36%), but the girls' experiences are more in line with their eventual career goals (teaching, nursing, clerical) than are the boys'. The vocational preferences of the boys are not based on firsthand experience, and this is seen as a genuine school and community lack.

583. Kruger, D. H., "Trends in Public Employment," Mich. Education J., November 1963, 41:18-20

584. Kuntz, R. H. and E. D. Edington, "Tests Can Predict Success of ARA Enrollees," Agricultural Education Magazine, February 1965, 37:197

585. Kvaraceus, W. C., "Teacher and Pupil in the Technological Culture of the School," Phi Delta Kappan, February 1965, 46:269-72

586. Kyle, R. W. (Northwestern Univ., Ill.) "A Study of Business Education in the Secondary Schools of Lake County, Indiana, with Implications for the Improvement of Instruction," Northwestern Univ., 1963, 428 pp.
Order U. Microfilms no. 64-2547, Ann Arbor, Mich.

The purpose of the study was to determine changes that were needed to prepare students to succeed in initial employment after they leave school.

587. Labine, R. A., "Job Outlook 1965," Chem. Eng., January 4, 1965, 72:86

588. Lair, E. A., "A County Program of Vocational Auto Mechanics," Illinois' Vocational Progress, April 1965, 22:25-8

589. Lamar, C., "New Opportunities for Teacher Education," Agricultural Education Magazine, July 1965, 38:12-14

590. Landreman, D., "Technical Writing," Clearing House, Spring 1964, 39:15-19

591. Lanham, F. W., "Business Education by Chance," Business Education Forum, February 1965, 19:3

592. Lanham, F. W., "Power of Automation; Power of Automation on the World of Work," Business Education Forum, February 1965, 19:15

593. Larsen, D. L. (Ohio State Univ.) "Industrial Management and Industrial Arts: A Resource Research with Implications for Curriculum Development," Ohio State Univ., 1964, 327 pp. Order U. Microfilms no. 65-5654, Ann Arbor, Mich.

This study deals with techniques of industrial arts laboratory organization and industrial arts curriculum content that can be derived from modern industrial management concepts and practices.

594. Lartz, G. F., "Industrial-Arts Visuals for Junior-High Students," School Shop, December 1964, 24:20

595. LaSalle, J. F. (Penn. State Univ.) "The Role of the Secondary School Business Education Department in Preparing Students for Employment in Business Offices Using Data Processing Equipment," Penn. State Univ., 1963, 182 pp. Order U. Microfilms no. 64-5374, Ann Arbor, Mich.

596. Lash, H. L., Current Literature in Vocational Guidance; An Annotated Bibliography, 3rd ed., Los Angeles junior college chronicies; Pub. no. 521, Los Angeles School Districts, 1959, 25 pp.

597. Lathrop, I. T. and E. J. Rawson, "Hand Skills in Industrial Arts," Industrial Arts & Vocational Education, February 1965, 54:27-8

598. Lathrop, I. T. et al., "Industrial Arts Graduates in Occupations Other than Teaching," J. Industrial Arts Education, January 1965, 24:34-5

599. Lawson, J. B., "Vocational Preparedness for a Technical Age," American Vocational J., September 1963, 38:10-12

600. Layton, W. L., ed., Strong Vocational Interest Blank: Research and Uses, Minnesota Studies in Student Personnel Work No. 10, Institute on the Strong Vocational Interest Blank, Univ. of Minn., 1955, Univ. of Minn. Press, 1960

601. Leamer, F. D., "Planning for the Future Use of Technical Personnel," Tappi, June 1963, Supp 43A-4A

602. LeBaron, H. R., "Home Economics Beyond the High School," National Assn. Secondary School Principals Bull., December 1964, 48:73-9

603. Lecznar, W. V., Years of Education as a Predictor of Technical Training Success, U.S. Air Force Personnel Res. Lab., Tech. Documentary Report No. 63, Part 2, 15 pp.

Previous findings on education variables as predictors of airman training and job success are reviewed as background for this new study. The predictive efficiency of years of education was assessed against final grade in 34 courses of technical training. By multiple regression techniques the percentage contributions were determined of education alone, aptitude tests alone, a combination of aptitude measures, and years of education to predict final school grade for each of the 34 samples of graduates. These data confirmed previous findings that education alone as a continuous variable was not as good a predictor as aptitude tests alone, and that years of education did not add appreciably to the level of prediction achieved by aptitude tests. Compared to the gains from an optimum combination of aptitude tests for each training criterion, any gain from adding the education variable proved practically unimportant.

604. Lee, A. and H. M. Hamlin, "New Designs in Vocational and Practical Arts Education," American Vocational J., November 1965, 40:20-3

605. Lee, B. L. and P. King, "Vocational Choices of Ninth Grade Girls and Their Parents' Occupational Levels," Vocational Guidance Quarterly, Spring 1964, 12:163-7

606. Legg, O. P. (Penn. State Univ.) "Programmed-Instruction and Lecture-Discussion Methods Compared for Effectiveness in Teaching Agricultural Finance to Vocational Agriculture Students," Penn. State Univ., 1962, 96 pp.
Order U. Microfilms no. 62-6369, Ann Arbor, Mich.

607. Lehrer, S., Man, Automation, and Dignity," School and Society, October 31, 1964, 92:303

608. Lehrmann, E., "How To Combat the Obsolescence of Skills," American Vocational J., November 1965, 40:27-8

609. Lemmon, M. L. (Univ. of Ill.) "A Comparison of Consumer Economic Knowledge of Two Illinois Populations of High School Home Economics Teachers and Their Students," Univ. of Ill., 1962, 67 pp.
Order U. Microfilms no. 62-2932, Ann Arbor, Mich.

610. Lenher, S., "Our Future and Automation," Automation, April 1964, 11:174-6

611. Levitan, S. A., Vocational Education and Federal Policy, Kalamazoo, Mich., W. E. Upjohn Institute for Employment Research, 1963

612. Levitan, S. A., Evaluation of Occupational Data and Their Use in Education Planning, Prepared for a conference on Occupational Data Requirements for Education Planning, Madison, Center for Studies in Vocational and Technical Education, University of Wisconsin, 1965, 18 pp.

613. Lewis, G. F. (Univ. of Ky.) "Occupational Mobility and Career Patterns of Small Businessmen in an American City," Univ. of Ky., 1958, 399 pp.
Order U. Microfilms no. 63-7400, Ann Arbor, Mich.

614. Lewis, P., "Emerging Technology and Instructional Systems," National Elementary Principal, September 1963, 43:34-9

615. Choice of Careers, 5th ed., Library Assn., Readers' Guide to Books, New Series No. 74, County Library Group, 1964, 28 pp.

616. Liles, P., "Retraining for New Jobs," National Business Education Yearbook, 1964, 2:51-71

617. Linson, M. G. (Ohio State Univ.) "A Guide for Self-Evaluation of State Supervisory Programs in Vocational Education in Agriculture," Ohio State Univ., 1964, 211 pp.
Order U. Microfilms no. 65-5659, Ann Arbor, Mich.

The central purpose of this study was to develop a guide for the self-evaluation of state supervisory programs of vocational education in agriculture as a basis for program development and improvement.

618. Lipset, S. M. and R. Bendix, Social Mobility in Industrial Society, Berkeley, University of California Press, 1959

619. Lipstreu, O. and K. A. Reed, "Employment and Trade Union Implications in Technological Transition," Personnel J., May 1965, 44:235-42

620. Little, J. K., "Wisconsin Research Center for Vocational-Technical Education," Phi Delta Kappan, April 1965, 46:412-3

621. Little, J. K., "Everyone Leaves School," Wis. J. Education, December 1964, 97:5-7

622. LoCascio, R., "Delayed and Impaired Vocational Development: A Neglected Aspect of Vocational Development Theory," Personnel and Guidance J., 1964, Vol. 42, No. 9, pp. 885-7

The main purpose of this paper has been to point out that thinking about vocational development only in terms of continuity and progress may result in insufficient attention being given to delayed and impaired vocational development. An attempt was made to consider continuous, delayed and impaired vocational development in terms of theory. Three vocational development units were hypothesized and some inferences drawn concerning their relevance to Super's career criteria concept.

623. Lofquist, L. H. and G. W. England, Problems in Vocational Counseling; The Application of Research Findings, Brown, 1961

624. Lombardi, J., "Occupational Education in California Junior Colleges," Educational Record, Spring 1964, 45:142-7

625. London, H. H., "Leaders for Vocational Education," School Shop, April 1965, 24:56-7

626. Longstreth, L. E., et al., "Experimental Evaluation of a High-School Program for Potential Dropouts," J. Ed. Psych., August 1964, 55:228-36

627. Loomis, R. A. (Mich. State Univ.) "Occupational Mobility in Rural Michigan," Mich. State Univ., 1964, 179 pp. Order U. Microfilms no. 65-697, Ann Arbor, Mich.

This study discusses the employment practices of nonfarm firms that may affect the ability of farm people to compete for nonfarm employment, the effect of selected socioeconomic differences between communities on the transition from farm to nonfarm work, the uses of farm resources that are controlled by operators who have transferred partly from farming to off-farm work, and measure designed to facilitate the transfer of farm operators to nonfarm work.

628. Losse, G., et al., McHenry County Community College Survey Report, DeKalb, Ill., McHenry County Community College Committee and Northern Illinois Univ., September 1963

629. Lotz, J.F., "Junior College Means Business," J. Business Education, December 1964, 40:129-30

630. Lovejoy, C. E., Vocational School Guidance; A Handbook of Job Training Opportunities, New York, Simon and Schuster, 1963, 174 pp.

631. Low, F. G. (Colo. State Coll.) "A Study of Industrial Arts Skills and Teaching Techniques as Appraised by Elementary Teachers, Compared to Those Taught by California Colleges," Colo. State Coll., 1963, 98 pp.
Order U. Microfilms no. 64-4195, Ann Arbor, Mich.

The purpose of this study was to determine whether industrial arts skills and teaching techniques desired by elementary classroom teachers employed in California were comparable to those taught by California state colleges in classes for elementary teachers in training.

632. Lowe, C. D. (Utah State Univ.) "The Need for and Ability To Support a Program of Cooperative Vocational Business Education in the Salt Lake City High Schools," Utah State Univ., 1963, 111 pp.
Order U. Microfilms no. 64-13,746, Ann Arbor, Mich.

By means of results obtained from questionnaires and surveys, this study seeks to point out the need for cooperative vocational business education. It surveys the employment picture and investigates training programs now available. Recommendations are made for both school and industry to develop jointly a program that will meet the needs of the community, industry, etc., and that will contribute to a solution to the unemployment problem.

633. Lowe, J. L. (Univ. of Mo.) "Educational and Occupational Aspirations of High School Seniors," Univ. of Mo., 1962, 310 pp.
Order U. Microfilms no. 62-6413, Ann Arbor, Mich.

634. Lumsdaine, A. A., "Educational Technology, Programed Learning, and Instructional Science," National Social Study Education Yearbook, 1963, 1964, 1:371-401

635. Lund, D., W. Garcia, and W. Foss, "Opportunities for Agricultural Education," American Vocational J., February 1965, 40:21-2

636. Luskin, S. H., "Outlook and Trends in Civil Aviation Employment," *Monthly Labor Rev.*, November 1963, 86:1290-6

637. Lyon, R., "Beyond the Conventional Career: Some Speculations," *J. Counseling Psych.*, 1965, Vol.12, No. 2, pp. 153-58

Career development theory has provided counselors with vital insights; however, there are indications that we will not be able to account for change in career patterns unless we become more aware of how the theory is tied to cultural determinants rather than to a universally applicable development psychology. Once these determinants are explicated, changing patterns will be more easily anticipated and we will be less reconciled to present day rigidities and dysfunctions involved in career choice. Various possibilities, including serial careers, are examined.

638. Mabon, E. J. and C. E. Bundy, "Competencies Needed in Country Elevator Grain Marketing," *Agricultural Education Magazine*, January 1965, 37:171-2

639. MacIndoe, R. B., "In-Service Training for Pre-Engineering Technicians," *Public Works*, February 1964, 95:107-8

640. MacLean, Jr., C. B. (Univ. of Md.) "Selected United States Government Publications as Resource Materials for Industrial Arts; Their Selection, Value, Availability, and Organization for Effective Use," Univ. of Md., 1963, 450 pp. Order U. Microfilms no. 64-6349, Ann Arbor, Mich.

641. *The Mechanical Design Technology Course*, Madison, Wis., Vocational, Technical and Adult Schools, 1962, 156 pp.

642. *The Plan of Administration, Supervision, and Coordination in the Madison Vocational, Technical, and Adult Schools*, Madison, Wis., Vocational, Technical and Adult Schools, July 1963, 18 pp.

643. Magoon, T., "Innovations in Counseling," *J. Counseling Psych.*, Winter 1964, 11:342-7

644. Mahan, F. E., "Junior Engineering: Creativity Course," *American Vocational J.*, November 1965, 40:44-6

645. Maley, D., *An Investigation and Development of the "Cluster" Concept as a Program in Vocational Education at the Secondary School Level*, College Park, Maryland, University of Maryland, February 1965, 16 pp.

646. Mangum, G. L., "Automation, Employment, and Human Values," *Educational Record*, Spring 1964, 45:122-7

647. Mangum, G. L., "Toward an Integrated Manpower Policy," Monthly Labor Rev., May 1965, 88:547-9

648. Mann, F. C., "Psychological and Organizational Impacts," Automation and Technological Change, Englewood Cliffs, N.J., Prentice-Hall, 1962, pp. 43-65

Summarizes findings of six empirical studies of plant and office automation. Draws several conclusions for the plant and office separately. Generally finds an increasing similarity between work in plant and office, increasing worker awareness of the personal impact of automation, and the probability of extended periods of disruption in basic working patterns.

649. Marks, M. R. and M. Hook, Development of a Standard List of Work Requirements in Airman Specialties, USAF Personnel Res. Lab., Tech. Documentary Report No. 63-19, 76 pp.

As part of the effort to devise efficient methods for collecting data that permit comparisons among airman specialties, this study tried to develop a comprehensive standard list of skills, knowledges, aptitudes and personal characteristics, attitudes, and work habits needed for satisfactory job performance. Basic requirements were identified in previous research, airman specialty descriptions, and job training standards. The initial list consists of 250 work requirements, each relevant to at least three specialties. Two experimental rating scales are defined in a form designed for collecting data from airman job (subject-matter) experts that will reflect differences in training requirements. In a preliminary field test, 7-level airmen in 43 career ladders reported that the standard list satisfactorily covers essential requirements of the 4-level specialties they rated; but their ratings indicate one scale must be revised. Appendixes give a list of 297 requirements identified by other investigators and definitions for each of the 250 work requirements in the standard list developed for airman specialties. 36 references are cited.

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792. Counseling Minority Group Youth: Developing the Experience of Equality Through Education, Columbus, Ohio, Ohio Civil Rights Commission, 1962, 139 pp.

Supplies counselors with information to help them guide minority group youths toward equality of opportunity. Discusses social and psychological considerations in counseling, improving the teaching and instructional methods for minority group youth, and testing their individual potential. Presents guidelines for working with minority youths. Includes an excellent bibliography.

793. Eighty Sources of Occupational Information, Columbus, Ohio, Ohio State Dept. of Education, Div. of Guidance and Testing, 1963

This article consists of a bibliography.

794. Oliver, H. S., "Des Moines, Iowa: Industry Trains and Hires Vocational Students," School Management, May 1964, 8:134

795. Olsen, H. P., "Are We Guilty of Technertia in Industrial Arts?" J. Industrial Arts Education, January 1965, 24:49-51

796. Olson, D. M., Industrial Arts and Technology, Englewood Cliffs, N. J., Prentice-Hall, 1963, 367 pp.

797. Olson, J.C. (Ohio State Univ.) "The Guidance Function of Industrial Arts in Teacher Education," Ohio State Univ., 1964, 372 pp.
Order U. Microfilms no. 65-1212, Ann Arbor, Mich.

The following subjects are considered in this study: The evolution of industrial arts and guidance in higher education, the role of guidance in industrial arts education through a documentary survey of literature, the content and processes of student personnel activities which should be included at the teacher education level to prepare teachers to meet the guidance function in industrial arts, and the gap between what students believe they need in regard to student personnel activities and guidance preparation and what industrial arts undergraduate programs can provide for them.

798. Olson, R. F., "Employment Persuasion: Vocational Counseling Meets Manpower Needs," Phi Delta Kappan, April 1965, 46:388-90

799. O'Rourke, E. W., "Catholic Schools in a Technological Age," Catholic School J., February 1965, 65:29-31

800. Overs, R. P., "Sociological Analysis of Vocational Counseling," Vocational Guidance Quarterly, Spring-Summer 1964, 12:159-62, 237-45

801. Packer, H. Q. (Temple Univ.) "A Study of Initial Employment Opportunities and Requirements of Selected Business Offices in Wilmington, Delaware, and the Related Instructional Program in Business Education in the Wilmington Public Schools," Temple Univ., 1953, 215 pp.
Order U. Microfilms no. 62-3377, Ann Arbor, Mich.

802. Page, G. T., "Training, Recognition and Functions of Engineering Technicians in Canada," Engineering J., September 1965, 48:23-7

803. Pair, P., "Impact of Automation on Vocational Education," Balance Sheet, November 1964, 46:110-2

804. Palan, R. and C. Painter, "Farming Is Business As Well As Science," American Vocational J., November 1964, 39:30-1

805. Palmer, H. B., "Education--Industry Statesmanship," Conference Board Record, August 1965, 2:21-4

806. Pantell, D. F., "Basic Adult Education: A Study," Wilson Library Bull., September 1965, 40:71-4

807. Paradis, A. A., You and the Next Decade, New York, D. McKay Co., 1965, 179 pp.

808. Parkinson, G. A. and J. J. Makowski, "Adult Education: Subject to Continuous Change," School Shop, April 1964, 23:52-4

809. Parnicky, J. J. et al., "Preliminary Efforts at Determining the Significance of Retardates' Vocational Interests," American J. Mental Deficiency, November 1965, 70:393-8

This article includes vocational interest and sophistication assessment test.

810. Parsh, C. R., "Can Business Education Students Qualify for Data Processing Jobs?" J. Business Education, December 1964, 40:99-100

811. Patrick, P., "Work Experience Program Meets Two Needs," *Agricultural Education Magazine*, September 1965, 38:61

812. Paulin, H.S. (Ohio State Univ.) "Ceramic Manufacturing Industry: Implications for Industrial Arts Curriculum Development," Ohio State Univ., 1964, 245 pp.
Order U. Microfilms no. 64-9583, Ann Arbor, Mich.

813. Payne, V. V., T. Woodward, and C. Parry, "Business and Distributive Education: Issues, Developments, Principal's View," *National Assn. Secondary School Principals Bull.*, November 1963, 47:7-18

814. Pearce, F. C., "Experience Program Better than Supervised Farming Program," *Agricultural Education Magazine*, September 1965, 38:60

815. Pearce, F. C. (Cornell Univ.) "The Educational Needs of Beginning Farm Operators in Becoming Established in Farming in New York," Cornell Univ., 1964, 371 pp.
Order U. Microfilms no. 65-3135, Ann Arbor, Mich.

This investigation seeks to determine those situational and individual characteristics of beginning farm operators which influence their comprehension and competence in becoming established in the occupation of farming.

816. Pearce, T., "Vocational Education a Community Responsibility," *American School Board J.*, April 1965, 150:36-7

817. Pearce, T., "Fluid Power, an Emerging Industrial Art," *School Shop*, May 1964, 23:20-1

818. Pease, D., "Fluid Power, a New Vocational-Technical Curriculum," *Industrial Arts & Vocational Education*, January 1965, 54:46-9

819. *Proceedings of the Governor's Conference on Employment Skills*, Harrisburg, Pa., 1959, 70 pp.

820. *Why Pennsylvania Needs Technical and Industrial Education in the 1960's*, Harrisburg, Pa., Commonwealth of Pennsylvania, Dept. of Public Instruction, 1961

821. Perkins, B. B. (Mich. State Univ.) "Labor Mobility Between the Farm and the Non-Farm Sector," Mich. State Univ., 1964, 193 pp.
Order U. Microfilms no. 65-714, Ann Arbor, Mich.

This study examines the mobility of labor out of and into American agriculture, with particular emphasis on the measurement of the rate of adjustment in the size of the farm labor force, and on the identification of impediments to the transfer of excess farm labor resources to nonfarm occupations. Results indicate that measures designed to deal with excess labor resources in agriculture, to be effective, cannot be dissociated from measures to maintain full employment, and that special large-scale retraining programs will be necessary to increase the assimilation of off-farm movers to the nonfarm labor force.

822. Perrella, V. C., "Employment of High School Graduates and Dropouts in 1963," Monthly Labor Rev., May 1964, 87:522-9

823. Perrone, P. A., "Factors Influencing High School Seniors' Occupational Preference," Personnel & Guidance J., June 1964, 42:976-80

824. Perrone, P. A. (Syracuse Univ.) "The Relationship of Creativity, Goal Orientation, Adherence to Conventional Values, Intelligence, and the Occupational Choice of High School Seniors," Syracuse Univ., 1962, 163 pp. Order U. Microfilms no. 63-3184, Ann Arbor, Mich.

825. Perrone, P. A., "Technicians; Somewhere In Between," Vocational Guidance Quarterly, 1964-65, Vol. 13, No. 2, pp. 137-41

Studied 67 boys enrolled for the 1st or 2nd year of a two-year post-graduate course in electronics and in mechanical design. These technical students stood between college and terminal high school students on GAT Battery norms and on parents' amount of education and occupational status. Subjects in electronics perceived their future job duties somewhat differently from subjects in mechanical design. Implications for guidance at the high school level.

826. Peters, A. J., "Changing Ideas of Technical Education," Brit. J. Ed. Studies, May 1963, 11:165-6

827. Peters, H. J. and S. F. Angus, "New Challenges in the Riddle of Occupational Information," Vocational Guidance Quarterly, Spring 1965, 13:179-83

828. Petersen, D. G., "Industrial Arts and the Elementary School Curriculum," J. Industrial Arts Education, March 1965, 24:34-6

829. Peterson, A.E., "Engineering-Technician Certification," Machine Design, September 30, 1965, 37:88-91

830. Peterson, C. A. and N. K. Norpel, Iowa Employment Trends, 1947-1960, State Univ. of Iowa, Bur. of Labor and Management Research Series No. 24, 1962, 27 pp.

831. Peterson, S. D. and C. W. Wilken, "Industrial Arts Consultants: Do the States Need One?" Industrial Arts & Vocational Education, April 1965, 54:24-5

832. Phares, G. J. (Univ. of Southern Calif.) "Secondary School Industrial Arts Courses in Drafting, Electricity-Electronics, and General Metal as They Relate to Industrial Practices," Univ. of Southern Calif., 1962, 475 pp.
Order U. Microfilms no. 62-6078, Ann Arbor, Mich.

833. Phipps, L. L., "Agricultural Education," Rev. Educational Research, 1962, Vol. 32, No. 4, pp. 384-92

Several recent developments have focused attention on problems pertaining to the function, value, and importance of agricultural education. Emphasis on science, mathematics, foreign languages, and guidance motivated many studies in agricultural education. Of the subject-matter pattern studies, the combination of two or more years of vocational agriculture plus two or more years of basic science gave students the best understanding of scientific concepts. Many of the research projects relating to education for jobs in the agricultural business were global status studies. The increasing shortage of persons professionally educated in agriculture has renewed interest in research questions in this area. Many studies are anticipated during the next few years. Additional research is needed to determine whether existing agricultural education curriculums in higher education meets the diverse and emerging educational needs for agriculture.

834. Pierson, G. N., "Educational and Career Choices for the Junior High School Pupil," Calif. Education, May 1965, 2:3-4

835. Platt, W. J., Remarks on Unemployment and Educational Policy, Paper presented to the 23rd National Meeting, Operations Research Society of America, May 27-28, 1963, Cleveland, Ohio

836. Plutte, W., "Pretechnology Program in Richmond, California," American School Board J., May 1965, 150:31-2

837. Poland, R. P. (Mich. State Univ.) "Implications of Certain Social, Economic, and Technical Trends on Business Curricula in the Public Community Colleges in Michigan," Mich. State Univ., 1962, 231 pp.
Order U. Microfilms no. 62-3185, Ann Arbor, Mich.

838. Pool, D. A., "Relation of Personality Needs to Vocational Counseling Outcome," J. Counseling Psych., Spring 1965, 12:23-7

839. Pool, F. M., "Guidelines for Manpower Development," Petroleum Management, December 1964, 36:90-4

840. Popham, E. and R. Farrelly, Opportunities in Office Occupations, New York, Vocational Guidance Manuals, 1965,110 pp.

841. Popper, H., "New Paths to Instrument Know-How," Chemical Engineering, December 7, 1964, 71:188

842. Porges, F., "Instrumentation: Its Career Possibilities," Science Teacher, March 1965, 32:27-30

843. Report of the Post-High School Education Study Commission, Indianapolis, Ind., Post-High School Education Study Commission, 1962

844. Pragan, O., "Labor's Stake in Vocational Education," American Vocational J., March 1965, 40:13-14

845. Prater, R. L. (Univ. of Mo.) "Employment Opportunities and Training Needs for Technicians in the State of Missouri with Projections Through 1970," Univ. of Mo., 1962, 231 pp. Order U. Microfilms no. 63-1541, Ann Arbor, Mich.

846. Prater, R. L., Employment Opportunities and Training Needs for Technicians in the State of Missouri, with Projections Through 1970, Columbia, Univ. of Mo., 1962, 22 pp.

847. Automation, The President's Advisory Committee on Labor-Management Policy, January 11, 1962, 11 pp.

Reports on the benefits and problems flowing from technological advances. Recommends private and governmental programs to reduce unemployment without sacrificing high rates of technological change or human values.

848. Price, G. A., "New Technological Age: Implications for Engineering," Tool & Manufacturing Engineer, August 1963, 51:57-9

849. Price, R. C., "Business Education," Rev. Educational Research, 1962, Vol. 32, No. 4, pp. 411-17

For some time, a major concern of educators in business teaching has been how to prepare candidates to improve teacher effectiveness. As a result of automation, the skills and knowledge needed by office workers are undergoing change. As more and more of the routine work becomes mechanized, the demand for unskilled clerks will decline. Perhaps the most striking body of recent evidence on typewriting instructional material concerns the traditional practice of devoting substantial amounts of

time to building ordinary copying skill and to evaluating typists on that basis. The further progress of business education lies not in more research but in research experimentally oriented and psychologically sound.

850. Prichard, N. W. (Penn. State Univ.) "Selected Factors Affecting School Administrators' and School Board Members' Attitudes Toward Vocational Trade and Industrial Education in Pennsylvania," Penn State Univ., 1962, 195 pp.
Order U. Microfilms no. 63-3075, Ann Arbor, Mich.

851. Prosser, C. A. and C. R. Allen, Vocational Education in a Democracy, New York, Appleton-Century, 1925

852. Pucel, D. J. and R. N. Evans, "Manpower Economics and Vocational Education," American Vocational J., April 1964, 39:18-19

853. Putney, A., "Meeting Industry's Needs for the Technical Secretary," Business Education World, March 1965, 45:65

854. Quinton, J. D. (Univ. of Houston) "The Development, Application and Appraisal of an Industrial Education Program," Univ. of Houston, 1965, 367 pp.
Order U. Microfilms no. 65-9907, Ann Arbor, Mich.

The study is concerned with demonstrating that well-rounded general adult education programs conducted in industry are desirable and beneficial to both industry and worker. Conclusions and recommendations are based on the outcome of a general education program in practical politics presented to 5000 employees of a gas and oil company.

855. Rafferty, M., "Labor's Stake in Education," Calif. Education, October 1964, 2:1

856. Raines, P. T., "Standards for Selecting Work Stations for Cooperative Part-Time Students," Business Education Forum, May 1964, 18:34-6

857. Raisner, A. D. (N. Y. Univ.) "The Effect of a Cultural Enrichment Program on the Vocational Aspirations and Expectations of Selected Groups of Junior High School Students," N. Y. Univ., 1963, 157 pp.
Order U. Microfilms no. 64-6564, Ann Arbor, Mich.

The purpose of this study was to determine the extent of change in students' vocational aspirations and vocational expectations resulting from a school cultural enrichment program in the 7th, 8th, and 9th grades of a New York City junior high school.

858. Ramsey, R. H., Report on Manpower Requirements for Engineers Scientists, and Technicians in Pennsylvania by 1970, University Park, Pa., Penn. Dept. of Public Instruction, 1962

859. Rees, F. D., Vocational Opportunities in the Health Sciences," J. Health, Physical Education & Recreation, November 1965, 36:70-1

860. Reeve, C. L.,"Work-Study Programs: An Integral High School Curriculum," J. Secondary Education, January 1964, 39:38-42

861. Refior, E. L. (State Univ. of Iowa) "Flexibility in Manpower Utilization," State Univ. of Iowa, 1962, 221 pp. Order U. Microfilms no. 63-957, Ann Arbor, Mich.

862. Reiss, Jr., A. J., Occupational Immobility, Nashville, Industrial Relations Research, Vanderbilt Univ., March 16, 1955, 41 pp.

863. Reiterman, M. F., "Partnerships in Training," Calif. Education, March 1965, 2:11-12

864. Renner, J. W., "Senior High School Students and the Scientist, Engineer and Technician," School Science & Mathematics, June 1964, 64:513-17

865. Report Submitted to the Panel of Consultants on Vocational Education in the Large Cities of America, Washington, Research Council of the Great Cities Program for School Improvement, 1962

866. Vocational Education for Tomorrow's World of Work, Washington, Research Council of the Great Cities Program for School Improvement, 1962

867. New Programs in Vocational Education, Washington, Research Council of the Great Cities Program for School Improvement, 1964

868. Report on Chemical Technician Training, Washington, D.C., Research Directors of the Manufacturing Chemists Assn., 1963

869. Resh, M. S., "Teaching in Vocational-Education Areas," National Social Study Education Yearbook '64, pt. 1, 1965, pp. 128-34

870. Reynolds, W. S. (Cornell Univ.) "An Analytical Study of the Basic Procedures Used in Revising the Undergraduate Curriculum in Certain Institutions Preparing Industrial Arts Teachers in Northeastern United States," Cornell Univ., 1963, 263 pp.
Order U. Microfilms no. 64-3646, Ann Arbor, Mich.

The purpose of the study was to analyze the techniques and procedures used to revise the undergraduate curriculum at selected institutions preparing industrial arts teachers. The analysis was to determine existing gaps between recommended curriculum revision procedures found in the literature and those practiced by the selected institutions.

871. Rice, D., "Employment and Occupations in the Seventies," Educational Leadership, January 1965, 22:230-5

872. Richan, F. K., "Upgrading Basic Employee Skills," Canadian Education & Research Digest, September 1965, 5:201-9

873. Richard, C. W., "Improved Vocational and Technical Education Demand Planning," Clearing House, May 1964, Vol. 38, No. 9, pp. 538-9

874. Righthand, H. (Univ. of Conn.) "A Comparison of Technical Institute Freshman Dropouts and Persisting Students with Respect to Sociological and Psychological Characteristics," Univ. of Conn., 1964, 227 pp.
Order U. Microfilms no. 65-2736, Ann Arbor, Mich.

This study deals with the problem of identifying some of the sociological and psychological characteristics which distinguish the technical institute freshman dropouts from persisting students. A second objective of this investigation is to describe the entering student body in terms of the characteristics measured. The study provides descriptive data of technical institute freshmen based on 17 variables. Of these, mathematical ability and study habits and attitudes discriminated between attrition and survival groups.

875. Rim, Y., "The Predictive Validity of Seven Manual Dexterity Tests," Psychologia, 1962, Vol. 5, No. 1, pp. 52-5

"The present study was planned to find out whether manual dexterity tests can predict success in shop mechanics in a vocational high school....The results suggest that the most important components of the ability needed are (1) arm and hand dexterity as tested by the Minnesota Rate of Manipulation Test and to a lesser extent by the Stromberg Dexterity Test; (2) two-hand coordination as tested by the Purdue Pegboard, and (3) eye-hand coordination as tested by the Crawford Small Parts Dexterity,"

876. Risher, C. G., "Survey: Some Pertinent Aspects of Fluid Power Education," *Industrial Arts & Vocational Education*, January 1965, 54:38-40; February 1965, 54:46-8

877. Ristau, R. A., "Forward Look in Facilities for Distributive Education," *American Vocational J.*, January 1965, 40:30-2

878. Robek, M. F., "Data Processing," *Business Education Forum*, May 1964, 18:41

879. Robinson, A. E. and L. A. Tomlinson, *The Curriculum Guide for Home Economics in Louisiana*, Baton Rouge, Louisiana Dept. of Education Bull. No. 954, 1962, 454 pp.

880. Robinson, M., *Holt Series*, Wilson Library Bull. No. 40, September 1965, pp. 56-8

This is a series of adult education textbooks.

881. Robinson, N. N. and D. L. Blake, "Content for Today's Farm Machinery Instruction," *Agricultural Education Magazine*, March 1965, 37:226

882. Robinson, T. R. (Iowa State Univ. of Sci. and Tech.) "Factors Related to the Occupations of Iowa Farm Male High School Graduates," Iowa State Univ. of Sci. and Tech., 1964, 279 pp.
Order U. Microfilms no. 65-4633, Ann Arbor, Mich.

The primary objective of this study was to investigate the relationship of selected factors to the occupations of Iowa farm male high school graduates during the period of 1950-54. Positive correlations were derived between occupational prestige scale value and (1) quartile rank, (2) semesters of mathematics, (3) occupational income, and (4) enrollment in post-high school educational institutions. Income received by the graduates was positively correlated with (1) quartile rank, (2) extracurricular activity participation, and (3) post-high school education. It was negatively correlated with recency of graduating.

883. Rogers, J. T. (Fla. State Univ.) "Retired Military Personnel as Junior College Instructors: An Analysis Conducted in Florida Public Junior Colleges," Fla. State Univ., 1964, 155 p
Order U. Microfilms no. 65-336, Ann Arbor, Mich.

This study investigated the professional effectiveness of retired military personnel occupying full-time positions and teaching a minimum of two classes in Florida public junior colleges as evaluated by administrators utilizing Teacher Evaluation Form TE-1. It also analyzed and compared data collected on randomly selected career teachers, presented student and administrator reaction to the jobs done by the retired military personnel, and discusses the way the latter feel about their experiences as junior college teachers.

884. Rohan, T. M., "Technicians Fill Engineer Gap," Iron Age, May 6, 1965, 195:70-2

This article tells how companies train and hire technicians at a record pace.

885. Roney, M. W. (Univ. of Md.) "An Analysis of the Interrelationship of Mathematics, Science, and Technical Subject Matter in Selected Technical Institute Curricula," Univ. of Md., 1964, 276 pp.
Order U. Microfilms no. 65-636, Ann Arbor, Mich.

This study seeks to describe the mathematics and science content of curricula in selected technical curricula, and to illustrate ways of coordinating instruction in mathematics, science, and technical subject matter in the instructional program. Curricula were analyzed in three technology areas: civil or construction technology, electronic technology, and mechanical design technology.

886. Roney, M. W., Occupational Criteria and Preparatory Curriculum Patterns in Technical Education Programs, USOE, Div. of Vocational Education Bull. No. 296, 1962, 26 pp.

887. Rose, R. E. (State Univ. of Iowa) "A Study of the Need for Revision in the Course Content of Distributive Education Programs as a Result of the Progress of Automation in Retailing," State Univ. of Iowa, 1963, 443 pp.
Order U. Microfilms no. 63-8025, Ann Arbor, Mich.

888. Rosen, D. E. (Purdue Univ.) "A Comparative Study of the Vocational and Educational Aspirations and Expectancies of Teenage Youth in the United States," Purdue Univ., 1964, 202 pp.
Order U. Microfilms no. 65-2641, Ann Arbor, Mich.

889. Rosenfeld, C., "Employment of School-Age Youth, October 1962," Monthly Labor Rev., August 1963, 86:907-13

890. Rosengarten, Jr., W. (N. Y. Univ.) "The Occupational Orientation of High School Seniors: An Experiment in Vocational Guidance," N. Y. Univ., 1961, 121 pp.
Order U. Microfilms no. 62-1428, Ann Arbor, Mich.

891. Rosenthal, N. H., "Technician Training: How, Who, Where?" Occupational Outlook Quarterly, September 1965, Vol. 9, No. 3, pp. 16-19

This article presents preliminary information on a Bureau of Labor Statistics comprehensive study of the training, future requirements for, and supply of technicians.

892. Rothchild, T. A., "Business Education and the Slow Learner; An Awakening Giant," Balance Sheet, November 1965, 47:104-8

893. Rothney, J. W. M., "What Are High School Graduates Doing Ten Years After High School?" Vocational Guidance Quarterly, Winter '64/65, 13:134-6

894. Rudiger, E. R., "Teaching Motor Skills In-Depth in Vocational Areas," Industrial Arts & Vocational Education, February 1965, 54:29-30

895. Ruehl, P. W. and A. G. Hofer, "Programmed Instruction," American Council Industrial Arts Teacher Education Yearbook, 1965, 14:98-109

This article includes a bibliography.

896. Ruley, M. J., G. J. Phares, and D. J. Ingraham, "What Business Officers Can Do To Improve Industrial Arts," J. Industrial Arts Education, September 1964, 24:20-2

897. Russell, J. D., Vocational Education, President's Advisory Committee on Education, Staff Study No. 8, Washington, Government Printing Office, 1938

898. Russo, M., "What and Why of the Area Vocational School," Industrial Arts & Vocational Education, November 1965, 54:28-30

899. Vocationally Talented Pupils, New Brunswick, N. J., Rutgers Univ. Graduate School of Education, Div. of Field Studies and Research, 1962

900. Ruth, R. A., "Readability of Occupational Materials," Vocational Guidance Quarterly, 1963, Vol. 11, No. 1, pp. 7-10

The Farr-Jenkins-Paterson simplification of the 1948 Flesch reading ease index was applied to the total content of the 1959 Career Information Kit Supplement (85 SRA Occupational Briefs and 35 items from other sources). The mean grade level rating was 14.7. The SRA materials used simpler vocabulary but tended to over-long sentences; they are, however, more consistent in readability level than items written by public relations people. The reading level of all these materials is too high to serve as incidental reading material for most high school students.

901. Rutherford, W. E. (Bradley Univ.) "Personnel Relations: A Study of the Selection, Placement, and Guidance of Beginning Industrial Arts Teachers in California Secondary Schools," Bradley Univ., 1962, 255 pp.
Order U. Microfilms no. 63-3704, Ann Arbor, Mich.

902. Ruttenberg, S. H.,"Educational Implications of Automation as Seen by a Trade Union Officer," Luther H. Evans and G. E. Arnstein, eds., Automation and the Challenge to Education, Washington, National Education Assn., 1962

903. Ryan, C. M. (Univ. of N.C., Chapel Hill) "An Analysis of the Preparation, Selection and Training of Teachers in the Trade and Industrial Education Program of North Carolina with Implications for the Future," Univ. of N.C., 1963, 183 pp.
Order U. Microfilms no. 64-9437, Ann Arbor, Mich.

This study sought to ascertain the teacher training needs of teachers in the North Carolina trade and industrial education program; to evaluate the trade and industrial teacher training program in the state; and to make proposals for a teacher training program.

904. Saben, S., "Geographic Mobility and Employment Status, March 1962-March 1963," Monthly Labor Rev., August 1964, 87:873-81

905. Salador, F., "Automation: An Increasing Problem for Guidance Counselors," N. Y. State Education, 1962, Vol. 50, No. 1, pp. 11-12

Reflecting on "the quickening pace of automation and its effects upon the future labor market," this counselor urges schools, in their curricula as well as in the work of the counselor, to prepare students for a world with minimal employment for the unskilled.

906. Salinger, H. E., "Major Problems in Youth Employment," National Assn. Secondary School Principals Bull., April 1964, 48:21-33

907. Salt, A., "Employment Opportunities for Skilled Workers," Occupational Outlook Quarterly, December 1965, Vol. 9, No. 4, pp. 12-19

Projections of employment requirements in 14 skilled occupations: carpentry; plumbing and pipefitting; grading and road machinery operations; all-round machinists; appliance service; stationary engineers; construction electricians; maintenance electricians; bricklayers; industrial machinery repairmen; structural-, ornamental-, reinforcing-iron workers, riggers, and machine movers; and tool and die makers.

908. Sampson, H. E., "Distributive Education," Rev. Educational Research, 1962, Vol. 32, No. 4, pp. 418-22

The rate of growth of research in distributive education has accelerated rapidly. One area of research noticeably missing is that dealing with teacher education specifically.

909. Samson, H. E. and D. A. Thompson, "High School Preparatory Education for Careers in Distribution," Business Education Forum, April 1964, 18:10-12

910. The Job Ahead, San Mateo, Calif., College of San Mateo, 1964, 229 pp.

Occupational needs and their educational implications for schools and colleges in San Mateo County.

911. Science and Engineering Technician Study, Sacramento, Calif., San Mateo College, Foothill College, San Jose City College, and the Instructional Materials Laboratory, Bureau of Industrial Education, Calif. State Dept. of Education, 1964, 70 pp.

This is a study of employment and education of science and engineering technicians in San Mateo and Santa Clara Counties, California.

912. Sanders, D. P. (Stanford Univ.) "Pattern of Educational Change During Economic Growth," Stanford Univ., 1962, 269 pp. Order U. Microfilms no. 62-5512, Ann Arbor, Mich.

This thesis is an exploratory attempt to identify and to describe the pattern of change in education which have accompanied successful economic development in three countries. The major objective was to derive generalizations about the forms taken by important educational variables during economic development in diverse cultures. These generalizations will hopefully serve as a source of hypotheses for further attempts to plan educational systems which will facilitate economic growth.

913. Sanders, G., "Work-Study Program Under the Vocational Education Act of 1963," National Assn. Secondary School Principals Bull., May 1965, 49:71-8

914. Satlow, I. D., "How Much Arithmetic in General Business?" Business Education World, January 1965, 45:18

915. Savage, C. F., "Manpower Planning and Personnel Register," Tappi, June 1963, Vol. 46, Suppl. 30A

916. Savitzky, C., "Job Guidance and the Disadvantaged," Clearing House, November 1964, 39:156-8

917. Savitzky, C., "WTP and EOA: The Educational Challenges of Current Anti-Poverty Programs," Clearing House, November 1965, 40:155-8

918. Savitzky, C., "S.T.E.P., Program for Potential Dropouts," National Assn. Secondary School Principals Bull., December 1963, 47:41-8

This article discusses a school-to-employment program.

919. Schaefer, C. J. and N. W. Prichard, "Some Schools Short Change Students," Vocational Guidance Quarterly, 1963, Vol. 11, No. 4, pp. 278-81

Summary findings of study by Pennsylvania State University for the Department of Public Instruction are given where schools offering vocational trade and industrial arts curricula were compared with those not offering such programs. Schools offering these programs appear to be doing better in vocational guidance than those not offering; they also use a greater variety of standardized aptitude tests (California Achievement batteries, Iowa Every Pupil Test, DAT, Kuder, SRA Youth Inventory); such schools also retain a higher percentage of male students throughout grades 10-12 (significant at the .01 level). Concomitantly, fewer of these graduates go on to college (34% versus 41%). What happened to the remaining 59% of nonvocational program people who did not go on to college is not here treated.

920. Schaeffer, C. J. and R. E. McChord, "Needed, a Definition of Technician," Technical Education News, June 1963, Vol. 23

921. Schank, K. L., "Power Technology," J. Industrial Arts Education, January 1964, 23:40

922. Schenberg, S., "Industry Comes to the Classroom; An Experiment in Industry-Education Cooperation for the Improvement of Classroom Instruction in Science," Science Teacher, April 1964, 31:38-9

923. Schenz, R.F. (Univ. of Calif., Los Angeles) "An Investigation of Junior College Courses and Curricula for Students with Low Ability," Univ. of Calif., 1963, 207 pp. Order U. Microfilms no. 63-7890, Ann Arbor, Mich.

The purposes of this investigation were to (1) identify and report (a) junior college practices in providing particular courses and curricula for students with low ability and (b) views of administrators regarding what should be done in providing particular courses and curricula for such students; (2) study and report the progress of students with low ability in two junior colleges which follow contrasting practices in this area.

924. Schiffman, J., "Employment of High School Graduates and Dropouts in 1962," Monthly Labor Rev., July 1963, 86:772-9

925. Schiffman, J., "Graduates and Dropouts in the Labor Force," NEA Research Bull., December 1963, 41:120-1

926. Schill, W. J., "The Use of the Q-Technique in Determining Curriculum Content," Calif. J. Educational Research, September 1961, Vol. 12, No. 4

927. Schill, W. J., Career Patterns of Technical and Vocational Educators; Predicting Educational Attainment of Craftsmen Who Become Teachers, Danville, Ill., Interstate Printers and Publishers, 1963, 78 pp.

928. Schill, W. J., "Education and Occupational Success," Personnel and Guidance J., January 1963, pp. 442-44

929. Schill, W. J., "What Knowledge Is Most Useful?" School Shop, December 1964, 24:21

930. Schill, W. J. and J. P. Arnold, Curricula Content for Six Technologies, Urbana, Ill., Univ. of Ill., Coll. of Education, Bur. of Educational Research and the Dept. of Vocational Education, 1965

This study identifies the competencies and the content which are common to six technical occupations and also identifies the competencies and the content common to two or more of the occupations investigated.

931. Schmitt, M. L., "State Curriculum Guide for Industrial Arts, 1951-61; An Annotated Bibliography," U.S. Office of Education Bull. No. 16, 1962, U.S. Dept. of Health, Education and Welfare, U.S. Government Printing Office, 23 pp.

932. The Drop-Outs, Chicago, Scholarship and Guidance Assn., 1962

A counseling agency for problems of adolescents shows the results of a study of a group of intellectually capable Chicago youngsters who wanted to leave or who actually left high school. The authors present new concepts on the meaning of school to students, and make suggestions for working with adolescents, parents, and school personnel.

933. Guidance and the School Dropout, ed. by Daniel Schreiber, 1964

A group of experts discuss the role of the guidance counselor with school dropouts, and present concrete suggestions for increased cooperation between the professions, the community and the schools.

934. The School Dropout, ed. by Daniel Schreiber, 1964

Fourteen stimulating essays on the societal factors of the school dropout problem and their implications for education and cooperative action with the labor market.

935. Schreiber, D., "Low Ability Group and the World of Automation," National Assn. Secondary School Principals Bull., November 1964, 48:73-82

936. Schreiber, D., "Business Education and the School Dropout," National Business Education Yearbook, 1964, Vol. 2, pp. 229-37

937. Handbook of Job Facts, 3rd ed., Chicago, Science Research Associates, 1963, 98 pp.

938. Scolnick, A. H., "Distributive Education, 1970," Business Education World, December 1963, 44:28-30

939. Scott, H. M. (Columbia Univ.) "Teacher Education and the Study of Community Problems in Maine: Suggestions for the Development of a General Education Course Dealing with Community Problems in Maine with Special Regard for Applications of Science and Technology," Columbia Univ., 1962, 201 pp.
Order U. Microfilms no. 63-3769, Ann Arbor, Mich.

The purpose of this study was to develop suggestions for a general education course for elementary school teachers that would help them to understand and resolve some of the regional and community problems in the State of Maine.

940. Scott, J., "Manpower Clouds Drilling Outlook," Petroleum Management, January 1965, 37:95-9

941. Scott, Jr., W. E. (Purdue Univ.) "The Reliability and Validity of a Six-Factor Job Evaluation System," Purdue Univ., 1963, 84 pp.
Order U. Microfilms no. 63-6541, Ann Arbor, Mich.

942. Scoville, J., "Development and Relevance of U.S. Occupational Data," Industrial and Labor Relations Rev., October 1965, 19:70-9

943. Scully, E. and K. Paxton, "Teachers Study Home Economics Concepts," American Vocational J., November 1963, 38:18-20

944. Seidman, H., "What the Federal Government Is Doing To Improve Manpower Control and Utilization in the Face of a Changing Technology," Advanced Management J., April 1964, 29:91-3

945. Selden, W., "Checklist in Planning Business Education Facilities," American Vocational J., January 1965, 40:29

946. Sellers, B. E. (Ohio State Univ.) "Present Status and Perceptions of Home Economics in the Community College," Ohio State Univ., 1963, 252 pp.
Order U. Microfilms no. 64-7051, Ann Arbor, Mich.

The purpose of this study was to determine the present status of home economics offerings in the community colleges in the United States and to secure data that would help educators clarify and define the function of home economics in this type of educational institution.

947. Serbein, O. N., Educational Activities of Business, Washington, American Council on Education, 1961

948. Setzer, N., Scientific and Technical Manpower Resources, Washington, National Science Foundation, 1964, 184 pp.

949. Sexton, P., "Negro Career Expectations," Merrill-Palmer Quarterly, 1963, Vol. 9, No. 4, pp. 303-316

The author summarizes the educational and vocational problems facing the Negro in the U.S. and reveals a scarcity of relevant research about crucial problems.

950. Sexton, P., "Project Dinosaur; Hebbronville's Efforts To Prevent Employe Extinction," Texas Outlook, November 1964, 48:25

951. Shafer, R. K., "Fresh New Look at Vocational Education: How Six Districts Are Meeting It," School Management, September 1964, 8:91-6

952. Shainman, L., "Problems in the Initial Development of the CRMD Work-Study Program," N.Y. Soc. for the Experimental Study of Education Yearbook, 1963, pp. 63-5

953. Shapp, C. and R. S. Kramer, "Airing the Issue," The Instructor, June 1964, 73:26

This article discusses the problem of staffing schools in depressed communities.

954. Sharpe, H. W. and C. M. Ray, "In Pursuit of Excellence," Business Education Forum, March 1965, 19:13-4

955. Shartle, C. L., Occupational Information: Its Development and Application, 3rd ed., Prentice-Hall Industrial Relations and Personnel Series, Prentice-Hall, 1959

956. Shaw, F., "Follow-Up Study of the 1963 High School Graduates," High Points, November 1965, 47:31-56

957. Sheats, P. H., "Paid Learning for All Employees," School & Society, April 3, 1965, 93:204

958. Sheldon, M. S. and A. G. Sorenson, "On the Use of Q-Technique in Educational Evaluation and Research," J. of Experimental Education, December 1960, Vol. 29, No. 2

959. Sherline, R. C., "Developing a Marketable Skill While Earning an Academic Diploma," N.Y. Soc. Experimental Study Education Yearbook 1963, pp. 55-7

960. Sherman, G. A., "Technician Training in Agriculture--A New Challenge," Agricultural Education Magazine, June 1965, Vol. 37, No. 12, pp. 324-6

961. Sherry, D. J., Labor Force, Connecticut Interregional Planning Program Tech. Report No. 132, Hartford, Conn. Development Commission, 1962, 93 pp.

This is an analysis of Connecticut's labor force characteristics, 1870-2000.

962. Shibata, K. E. (Univ. of Neb. Teachers Coll.) "A Program To Determine Educational Needs in the Field of Vocational Education in Local School Districts," Univ. of Neb. Teachers Coll., 1965, 192 pp.
Order U. Microfilms no. 65-10,790, Ann Arbor, Mich.

This thesis develops a program to determine the vocational education needs in individual local school districts. Included are results obtained by applying the program to specific school districts and generalized recommendations are made on the results obtained.

963. Shih, S. H. (Mich. State Univ.) "A Basis for Course Content in Rural Electrification for the Preparation of Vocational Agricultural Teachers in Michigan," Mich. State U., 1962, 22 pp.
Order U. Microfilms no. 62-4463, Ann Arbor, Mich.

964. Shilt, B. A., "Some Facts About the Vocational Education Act of 1963," Balance Sheet, October 1964, 46:52-5

965. Shiner, E. V. (Columbia Univ.) "Self Concepts of Individuals in the Process of Changing Occupations," Columbia Univ., 1963, 85 pp.
Order U. Microfilms no. 64-5691, Ann Arbor, Mich.

966. Shocksnider, H.G., "Who Is a Technician?" Industrial Arts & Vocational Education, May 1965, 54:30

967. Shoemaker, B. R., "Involving the Community in Needs Studies and Program Development," National Assn. Secondary School Principals Bull., May 1965, 49:113-23

968. Shoemaker, B. R., "Pre-employment Training for Out-of-School Youth and Adults," Theory into Practice, December 1964, Vol. 3, No. 5, pp. 175-8, Columbus, Ohio, Bur. of Educational Research & Service, Ohio State Univ., 1964

969. Shott, G. L., L. E. Albright, and J. R. Glennon, "Predicting Turnover in an Automated Office Situation," Personnel Psych., 1963, Vol. 16, No. 3, pp. 213-19

In an attempt to reduce the high rate of turnover among clerical employees working in a highly automated office, existing personnel information was examined for items which might discriminate short tenure from long tenure employees. Sources of data were the application blank, test scores, and reference injuries. Nine items for women and 7 for men were found which cross-validate significantly and predicted well using validity extension samples.

970. Shotwell, T. K., "First Agricultural Textbook," Agricultural Education Magazine, September 1963, 36:68

971. Shultz, H. C. (Univ. of Pittsburgh) "A Study of Recruitment and Selection of Public School Teachers in One Selected Area of Pennsylvania," Univ. of Pittsburgh, 1964, 104 pp.
Order U. Microfilms no. 65-7955, Ann Arbor, Mich.

This thesis is a normative-survey study designed to discover what the schools in one selected area of Pennsylvania are doing to recruit and select a quality teaching staff. The findings basically support the hypotheses that (1) recruitment and selection practices are left to chance by many school districts; and (2) teachers are hired to meet immediate needs without thought of future demands of the school situation. The thesis analyzes and criticizes existing recruitment, selection, and evaluation practices and presents certain guidelines for improvements.

972. Shyhlman, W. D., "Distributive Education in Vocational-Technical Schools and Community Colleges," American Vocational J., September 1963, 38:17-18

973. Siegel, A. I. and D. G. Schultz, "Thurstone and Guttman Scaling of Job Related Technical Skills," Psych. Rept., 1962, 10:855-61

"Working within the Naval job specialty (rating) of aviation machinist's mate, it has been demonstrated that check lists of tasks normally performed by strikers (trained men of minimum job experience) in this specialty can be scaled by both the Thurstone and Guttman techniques. Two different types of check lists were developed; the checkout type appeared to be less satisfactory from the standpoint of scalability than the in-service training type.... Although aptitude tests were predictive of achievement in the Naval training school basic to the job specialty, neither the tests nor school achievement appeared to be related to the Guttman scales.... The finding of task scalability seems to indicate an aspect of the structure of the job, as well as to provide a basis for the construction of short, convenient job performance evaluation instruments."

974. Silberman, C. E. and E. K. Faltermayer, "Technology and the Labor Market," (in two parts) Fortune, May 1965, 71:112-5; August 1965, 72:156-61; Condensed in Management Review, June 1965, 54:26-30

975. Silk, L.S., "Upgrading the Labor Force," excerpt from The Research Revolution, New Jersey, McGraw-Hill Book Co., 1960

976. Silverman, E. H. (Temple Univ.) "An Investigation of Certain Occupational Interests of 1600 Students Enrolled in Eight Selected Vocational and Technical Training Programs Not Requiring a College Degree," Temple Univ., 1964, 194 pp. Order U. Microfilms no. 64-13,677, Ann Arbor, Mich.

This study seeks to determine if high school and post-high school students enrolled in eight different curricula identified as trade and technical training programs could be differentiated from each other when they were measured with a vocational interest inventory. Statistically significant differences in interest were found among all trade and technical groups of the same sex and significant differences were noted between technical and trade students and their academic counterparts.

977. Silvern, L.C., "Shaping and Controlling Human Behavior in Man-Machine Systems," Proc. IME, 1963, Vol. 177, No. 34, pp. 935-47; Also in Naval Engineers, August 1964, 76:595-604

A discussion of this article also appears in Proc. IME, 1963, Vol. 177, No. 34, pp. 948-9 and a reply to the article appears in the same issue on pages 949-50.

978. Silvius, G. H. and R. C. Bohn, eds., Organizing Course Materials for Industrial Education, McKnight, 1961

This book includes a bibliography.

979. Simpson, E. J., "Projections in Home Economics Education," American Vocational J., November 1965, 40:41-3

980. Simpson, R. L. and I. H. Simpson, "Social Origins, Occupational Advice, Occupational Values, and Work Careers," Social Forces, 1962, Vol. 40, No. 3, pp. 264-71

380 interviews indicate that "workers who received advice from numerous sources, whose main advisers were outside their families, and who had positive orientations to work were relatively likely to obtain high-status first jobs. These relationships were to some extent independent of each other and of workers' class backgrounds, and for the most part they also applied to the workers' choice of their most recent jobs. However, workers' advice-seeking and values when they chose their first jobs were not related to their later job histories. The findings are examined in the light of alternative theories of occupational choice."

981. Simpson, V. G. (Indiana Univ.) "The Beginning, Subsequent Development, and Ultimate Termination of Selected Vocational Distributive and Trade and Industrial Programs in a Midwestern State," Indiana Univ, 1964, 181 pp.
Order U. Microfilms no. 65-2397, Ann Arbor, Mich.

This study of the part-time cooperative vocational education programs in two rural counties in a midwestern state was designed to provide comprehensive data relative to the factors which influenced the development and termination of these unique programs. An analysis and criticism of several pilot programs form the basis for recommendations regarding future similar projects.

982. Sinick, D., "Ethical and Legal Implications of the Vocational Consultant Program," Personnel & Guidance J., December 1964, 43:355-9

983. Sister Mary Catherine, "What Does Automation Mean to Our High School Program?" Business Education World, June 1964, 44:22

This article is a survey of company officials in the Milwaukee area.

984. Sister Mary Judith and C. M. Williams, "Data Processing in the Business Curriculum; High School of Rochester, N. Y. and Vicinity," J. Business Education, November 1964, 40:52-4

985. Skellon, J. H., "Technical Training for the Chemical Industry; How They Do It in France," Manufacturing Chemist, October 1963, 34:486-8

986. Sleeman, P. J., "Industrial Arts in a Technological Setting," J. Secondary Education, April 1964, 39:151-3

987. Slotkin, H., "New Programs for Dropouts," Vocational Guidance Quarterly, 1963-64, Vol. 12, No. 2, pp. 127-32

A report of three experimental projects of the New York City school system. Project I was a study-work-guidance program designed to retain potential dropouts until graduation; Project II was an evening school program; Project III, a program of pre-employment preparation, job placement and follow-up for school-alienated work-oriented pupils. Experimental an control groups were formed for all three projects. Detailed results are given for all three of the projects, all of which achieved considerable success. In dealing with the dropout problem and manpower retraining, it is usual to concentrate on expansion of vocational and educational opportunities, expecting that such would be self-motivating. The present results suggest that for self-motivation to occur, one must focus on the vocational development of each individual.

988. Smalley, L. H., "Evaluating Your Program," Industrial Arts & Vocational Education, June 1965, 54:23

989. Smalley, L. H. (Mich. State Univ.) "The Development and Feasibility of Mass Production as an Educational Experience in Industrial Arts," Mich. State Univ., 1962, 242 pp. Order U. Microfilms no. 62-4464, Ann Arbor, Mich.

990. Smith, C. R., "Manpower Development Training Program; Challenge to Agriculture," American Vocational J., October 1964, 39:24-5

991. Smith, D. S. et al., "Home Economist-Homemaker Aide Team Expands Environmental Enrichment Program," J. Home Economics, November 1965, 57:695-700

992. Smith, G. W., "Vocational and Technical Education; A Survey of Current Programs in Illinois Public Junior Colleges," Illinois Education, January 1965, 53:210-12

993. Smith, H. T., Education and Training for the World of Work: A Vocational Education Program for the State of Michigan, Kalamazoo, Mich., W. E. Upjohn Institute for Employment Research, July 1963

994. Smith, J.A. (Univ. of Kan.) "Vocational Education in the Comprehensive High School," Univ. of Kan., 1965, 239 pp. Order U. Microfilms no. 65-11,959, Ann Arbor, Mich.

The study sought to determine the role of the comprehensive high school in vocational education as affected by the area vocational school development. Were the responsibilities for vocational education being shared by the area vocational schools, special commercial trade schools and other post-high school institutions; or was there need for vocational instruction in the comprehensive high school? If vocational education is not included, then the secondary schools tend to become institutions for academic pursuits, preparatory for college or university education exclusively.

995. Smith, R., "Block System for Teaching Farm Mechanics," Agricultural Education Magazine, April 1965, 37:252-3

996. Smith, R. C., "Agricultural Teacher Education Developments," J. Teacher Education, March 1964, 15:77-80

997. Smith Jr., R. G., The Development of Training Objectives, Research Bull. No. 11, Human Resources Research Office, 1964, 101 pp.

998. Smith, Jr., R. G., An Annotated Bibliography on Proficiency Measurement for Training Quality Control, Res. Mem., Human Resources Research Office, 1964, 27 pp.

999. Smith, R. M., "One Hundred and Fifty Institutes in Adult Education," Adult Leadership, September 1965, 14:90-1

1000. Smith, R. M., "Industrial Arts Activities for Children with Individual Differences," J. Industrial Arts Education, May 1964, 23:21-4

1001. Smith, T. E., "Image of High-School Teachers: Self and Other, Real and Ideal," J. Educational Research, November 1965, 59:99-104

1002. Smith, W. P., "Premise and Promise for Vocational Education in California," California Education, September 1964, 2:25-6

1003. Smyth, C. S., "Industrial Training Act; Its Scope and Significance," Personnel Management, June 1964, 46:55-6

1004. Snepp, N. O. (Ohio State Univ.) "Agricultural Offerings in Community Colleges in the United States," Ohio State Univ., 1963, 239 pp.
Order U. Microfilms no. 64-7056, Ann Arbor, Mich.

1005. Snyder, E. E., "Philosophical and Research Implications of the Work-Study Programs," N.Y. Soc. for the Experimental Study of Education Yearbook, 1963, pp. 66-7

1006. Snyder, F., "Agricultural College and Technical Education," Agricultural Education Magazine, November 1963, 36:105-1

1007. Snyder, Jr., J. I., "Automation and Education," J. Industrial Arts Education, January 1965, 24:16-18

1008. Solstad, A. K. (Univ. of Minn.) "A Study of the Relationship Between Income of Farmers in the Minnesota Vocational Agriculture Farm Management Service and Their Activities in the Farm Power and Machinery Area with Implications to a Course of Study," Univ. of Minn., 1963, 187 pp.
Order U. Microfilms no. 63-7956, Ann Arbor, Mich.

The purpose of this study is to determine a basis for a course of study in farm power and machinery and to learn other facts about farmer activities in this area.

1009. Somers, G. G., ed. by Barbara Marwell, Survey of Geographically Mobile Workers, Wisconsin Survey Research Report No. 7, Madison, Wis., Univ. of Wis., Extension Div., January 1965, 10 pp.

1010. Somers, G. G., E. L. Cushman, and N. Weinberg, eds., Adjusting to Technological Change, New York, Harper & Row, 1963, 230 pp.

A publication in the Industrial Relations Research Association series containing 8 essays by various experts. Buckingham (Georgia Inst. Technol.) discusses gains and costs of technological change. Taft (Brown Univ.) argues that technological unemployment is not possible in the long run and that unions have rarely concentrated on long-run effects. Barbush (Univ. of Wis.) Levitan and Shappard discuss the impact of technology on labor-management relations and the community. Killingworth (Mich. State Univ.) describes cooperative approaches to this problem. Weber (Univ. of Chicago) outlines interplant and more distant transfers for displaced employees. Young (Univ. of Wis.) relates the rather sad experience of the Oklahoma City "crash" testing, counseling, and retraining program of Armour & Co. with workers suddenly unemployed because of plant shutdown. Olsson (Sweden) points out the implications of technological change in Europe. A stronger and more widely used Employment Service in USA is needed to help solve problems of worker displacement.

1011. Sparks, M. C., "Office Services Clubs Provide Work Experience Without Fuss," Business Education World, January 1965, 45:2-3

1012. Sparrow, R. L., "Exploring Farm Related Occupations; Three Years Experience with a Three-Phase Program in Indiana," Agricultural Education Magazine, April 1964, 36:228-9

1013. Spence, W. P., "First National Seminar on Research in Vocational Education," Industrial Arts & Vocational Education, September 1963, 52:66

1014. Spence, W. P., "Individual-Oriented vs. Group-Oriented Learning in Industrial Arts," Industrial Arts & Vocational Education, November 1964, 53:52

1015. Spence, W. P., "Consultant's Clinic: Research in Industrial Arts Education," Industrial Arts & Vocational Education, November 1965, 54:21

1016. Stadt, R. W., "Criteria for Evaluating Theories of Industrial Arts," Industrial Arts & Vocational Education, September 1964, 53:26-8

1017. Stahlecker, L. V., "School-Work Programs for the Slow Learners," Clearing House, January 1964, 38:299-301

1018. Stambler, H., "Manpower Needs in 1975; Detailed Projections of Occupational Requirements in the Next Decade," Monthly Labor Rev., April 1965, 88:378-83

1019. Stanley, C. E., "Coordination of Vocational Agriculture with Other Vocational Programs," Agricultural Education Magazine, July 1964, 37:5

1020. Steinberg, W. B., "Occupational Course in Graphic Arts Provides Skill Training," California Education, June 1964, 1:15

1021. Stern, B. J., Opportunities in Machine Shop Trades, New York Vocational Guidance Manuals, 1965, 112 pp.

1022. Stevens, G. Z., "Studies in Progress in Agricultural Education," Agricultural Education Magazine, September 1964, 37:73-7

1023. Stieber, G. N., "Teacher Salary Trends," NEA J., September 1965, 54:20-1

1024. Stone, A. A., Opportunities in Agricultural Engineering, 1st ed., Vocational Guidance Manuals, New York, Educational Books Div. of Universal Publishing and Distributing Co., 1963, 128 pp.

1025. Strandberg, C. E. (Tex. A&M Univ.) "A Comparison of Selected Industrial Printing Practices with Those Taught in High School Vocational Printing Classes," Tex. A&M Univ., 1963, 175 pp.
Order U. Microfilms no. 64-6222, Ann Arbor, Mich.

The purpose of this study was to ascertain what current practices were required of the worker in the printing industry, the attitude of industry toward the teaching methods employed in secondary schools teaching vocational printing, what equipment was used in the printing industry, and how these findings compared with similar elements in secondary schools offering vocational printing instruction.

1026. Stromsdorfer, E. W. (Washington Univ.) "Structural Unemployment in a Local Labor Market Area: A Theoretical and Empirical Investigation of the Process of Labor Force Transformation," Washington Univ., 1962, 159 pp.
Order U. Microfilms no. 63-4863, Ann Arbor, Mich.

This dissertation is designed to complement theoretical discussions of the process of labor force adjustment to structural change in the economy by attempting to assess, through the utilization of income and cost data, the feasibility of worker readaptation after displacement due to structural change.

1027. Strong, M.E., Bibliography of Research in Trade and Industrial Education, U.S. Office of Education, Div. of Vocational Education, Trade and Industrial Education Branch, Misc. 3588, 1960, 37 pp.

1028. Strong, M.E., Research in Industrial Education; Summaries of Studies, 1956-59; with Subject Index to Research in Industrial Education; Summaries of Studies, 1930-55, U.S. Office of Education, Div. of Vocational Education Bull. No. 293, Trade and Industrial Education Series No. 72, U.S. Government Printing Office, 1961, 148 pp.

1029. Strong, M.E., Curriculum Materials for Trade and Industrial Education, U.S. Office of Education, Vocational Div. Bull. No. 297, Trade and Industrial Education Series No. 74, 1961, 76 pp.

A listing of materials available from state and local sources.

1030. Strong, M. E., Research in Industrial Education, Summary of Studies, 1960-1961, U.S. Office of Education, Vocational Div. Bull. No. 299, Trade and Industrial Education Series No. 75, Washington, U.S. Dept. of H.E.W., 1962, 34 pp.

1031. Strong, M. E., Curriculum Materials for Trade and Industrial Education, 1963, U.S. Office of Education, Vocational Div. Bull. No. 303, Trade and Industrial Education Series No. 76, 1963, 88 pp.

1032. Super, D. E., "Report on Recent Development," Personnel & Guidance, May 1965, 43:960-1

1033. Super, D. E. and J. O. Crites, Appraising Vocational Fitness, New York, Harper, 1962, 688 pp.

This is a revision of the book with the same title which appeared in 1949. The 22 chapters discuss testing, appraisal, prediction, administration, scoring, statistics, aptitudes, talents, and the preparation of test reports. Three appendices present illustrative cases in appraisal and follow-up as well as a listing of test publishers and scoring services. There are author, test, subject, and occupational indices.

1034. Sutherland, S. S., "Junior Colleges Pioneer in Training Agricultural Technicians," Agricultural Education Magazine, November 1963, 36:103-4

1035. Sutherland, S. S., "Applying Principles of Biology in Teaching Agriculture," American Biology Teacher, January 1965, 27:49-51

1036. Sutton, F. C. (Wayne State Univ.) "Factors Affecting the Retention of Part-Time Business and Industrial Teachers in Community Colleges--Henry Ford Community College, a Case Study," Wayne State Univ., 1962, 302 pp.
Order U. Microfilms no. 62-3872, Ann Arbor, Mich.

1037. Swanson, J. C. and E. G. Kramer, "Vocational Education Beyond the High School," National Soc. Study Education Yearbook '64 pt. 1, 1965, pp. 168-85

1038. Swanstrom, T. E., "Employment of School Age Youth, October 1964," Monthly Labor Rev., July 1965, 88:851-6

1039. Swope, M. R. (Columbia Univ.) "High School Guidance Counselors' Perception of Selected Careers for Women College Graduates," Columbia Univ., 1963, 269 pp.
Order U. Microfilms no. 64-7208, Ann Arbor, Mich.

This study examines the perceptions and some factors influencing perceptions of high school guidance counselors toward certain aspects of the following careers for women college graduates: nurse, elementary teacher, home economist, secretary and stenographer, and scientist. Perceptions defined for study were the dual role of women, personal

qualities needed by workers, facts about college curricula, facts about jobs and salaries, prestige value of jobs, future employment opportunities, counselors' perceptions of own competence in advising, and factors which influenced their competence to advise.

1040. Annotated Bibliography for Youth and Work Project, New York, Taconic Foundation, 1962, 38 pp.

1041. Youth in the World of Work; Some Demonstrations of Guidance, Training, and Work Programs for Youth in the United States, New York, Taconic Foundation, 1962, 59 pp.

1042. Talkington, J. E. (Colo. State Coll.) "An Analysis of Industrial Arts Objectives as Determined by Q-Technique," (Research Study No. 1), Colo. State Coll., 1962, 229 pp. Order U. Microfilms no. 62-4133, Ann Arbor, Mich.

The problem was to compare the Q-sort responses of the industrial arts teachers in the public schools of Colorado with those of the 35 selected prominent persons in industrial arts to determine whether there was a unity of direction as to the priority of industrial arts objectives on a state and on a national level.

1043. Tate, F. E. (Univ. of Mo.) "The Relationship Between the General Aptitude Test Battery and Achievement of Eleventh Grade Students in Selected Vocational and Technical Courses," Univ. of Mo., 1965, 119 pp.

1044. Taves, M. J., Mobility Among High School Graduates, Scientific Journal Series No. 4281, Sociology of Rural Life No. 3, St. Anthony Park, Minn., Univ. of Minn., Institute of Agriculture, Experiment Station, 1959, 32 pp.

1045. Taxis, D. O. (Univ. of Southern Calif.) "The Role of the County Industrial Arts Education Consultant in California," Univ. of Southern Calif., 1962, 314 pp.
Order U. Microfilms no. 62-3749, Ann Arbor,Mich.

1046. Taylor, H. C., "Avalanche of Youth into the Labor Force," Monthly Labor Rev., May 1965, 88:544-6

1047. Taylor, O. C. "PCP: A Program To Rehabilitate Dropouts," School Management, August 1965, 9:39-41

This article describes a personalized curriculum project.

1048. Taylor, R. E., "National Seminar To Discuss Improving Agricultural Tech Programs," Agricultural Education Magazine, June 1964, 36:282

1049. Taylor, R. G. and D. L. Hecker, Interest and Ability Pattern Comparison of Successful and Unsuccessful Male College Students in Descrepant Technical and Associate Degree Programs, Big Rapids, Mich., Ferris State College, December 1964, 26 pp.

1050. Teague, H. F., Learning Core, Wilson Library Bull., September 1965, 40:60

1051. Tenney, A. W., "How Agricultural Education Can Cooperate with Other Vocational Education Services," Agricultural Education Magazine, December 1964, 37:138-9

1052. Terwilliger, J. S. (Univ. of Ill.) "Dimensions of Occupational Preference," Univ. of Ill., 1962, 162 pp.
Order U. Microfilms no. 63-3347, Ann Arbor, Mich.

1053. Dallas Manpower Outlook to 1965; A Report of a Survey of Manpower Requirements and Training Resources of Metropolitan Dallas, Austin, Texas Employment Commission, 1960, 90 pp.

1054. Austin Manpower: Present and Future, 1961-1966, Austin, Texas Employment Commission, 1962, 67 pp.

1055. Thal, H. M., "Careers in Industry; The Life Insurance Business," Vocational Guidance Quarterly, Autumn 1964, 13:41-4

1056. Thiede, W. and J. Meggers, "Research and Investigations in Adult Education," Adult Education, Summer 1965, 15:195-234

1057. Thieme, E. (Penn. State U.) "Pupil Achievement and Retention in Selected Areas of Grade Five Using Elementary Industrial Arts Activities Integrated with Classroom Units of Work," Penn. State Univ., 1965, 164 pp.
Order U. Microfilms no. 65-9830, Ann Arbor, Mich.

This thesis discusses the value of elementary industrial arts activities when integrated with classroom instruction units in selected areas of fifth grade work. That is to say, the study explores the possibility and value of using industrial arts-construction experiences in teaching other subjects. Results indicate no significant short or long-term differences in pupil achievement or retention between traditional and industrial arts-construction activity approaches.

1058. Thomas, S. and D. D. Knudsen, "Relationship Between Nonpromotion and the Dropout Problem," Theory into Practice, June 1965, 4:90-4

1059. Thompson, A. S., "Personality Dynamics and Vocational Counseling," Personnel & Guidance J., January 1960, 38:356-7

1060. Thompson, J. F., "State Farm Organizations Support Vocational Agriculture," Agricultural Education Magazine, December 1964, 37:132-3

1061. Thompson, J. J. (Univ. of Fla.) "Concepts of Automation with Implications for Public Education," Univ. of Fla., 1963, 195 pp.
Order U. Microfilms no. 64-5638, Ann Arbor, Mich.

The central purpose of this study of automation and education was to arrive at a concept of automation comprehensive enough to assist educators in becoming sensitized to social and educational problems to technological developments and in interpreting and delineating those characteristics of the automation movement which are of major concern to education.

1062. Thompson, R. J., "Outcomes in Vocational and Technical Education in the Junior College," National Business Education Yearbook, 1963, 1:371-83

1063. Thompson, R. J., "Recent Developments in Audiovisual Education," National Business Education Yearbook, 1964, 2:123-34

1064. Thorne, M. H., "Maximum Benefits from the Cooperative Work Experience Program," J. Business Education, May 1964, 39:327-9

1065. Tierney, W. F., "Public Relations and the Industrial Arts Teacher," Industrial Arts & Vocational Education, September 1963, 52:26-9

1066. Tillinghast, Jr., B. S., "Choice Orientations of Guidance," Vocational Guidance Quarterly, Autumn 1964, 13:18-20

1067. Tobi, R., "Training Program for Instrument Technicians," Instrument and Control Systems, February 1964, 37:137-40

1068. Toews, E. O., "Present Status of Junior College Education in California," California Education, May 1965, 2:14-15

This article discusses types of educational programs.

1069. Tom, F. K. T. and J. A. Scanlon, "Programmed Instruction in Agriculture Limited," Agricultural Education Magazine, November 1965, 38:110-11

1070. Tomlinson, R. M. (Univ. of Ill.) "A Comparison of Four Methods of Presentation for Teaching Complex Technical Material," Univ. of Ill., 1962, 341 pp.
Order U. Microfilms no. 62-6244, Ann Arbor, Mich.

1071. Tonne, H. A., "Trends in Business Occupations in the 1960s," J. Business Education, May 1963, 38:314-16

1072. Toothman, R. C. and P. G. Haines, "Post-High School Preparatory Education for Careers in Distribution," Business Education Forum, April 1964, 18:13-15

1073. Torpey, W. G., "Manpower Planning as an Aid to Better Utilization of Scientific and Technical Personnel," Tappi, June 1963, Vol. 46, Suppl. 16A-17A

1074. Turnquist, C. H., "Galaxy Approach to Education for the World of Work," School Shop, November 1965, 25:25-7

1075. Unikel, G., "Training Technical Communicators; Our Science and Technology Depend on Good Communication and Junior Colleges Have a Responsibility To Train the Needed Technicians," Junior College J., March 1965, 35:28-32

1076. Vocational and Technical Education in Illinois: Tomorrow's Challenge, Urbana, Univ. of Illinois, Bur. of Educational Research, 1960

1077. Technical Education in and for Rural Areas Project, Urbana, Univ. of Illinois, Dept. of Vocational and Technical Education, 1964, 74 pp.

1078. The Geographic Mobility of Labor: A First Report, Ann Arbor, Survey Research Center, Institute of Social Research, Univ. of Mich., 1963

Five monographs based on the above study were published during 1964 by the Area Redevelopment Administration, U.S. Dept. of Commerce:

(a) The Cost of Geographic Mobility
(b) Negro-White Differences in Geographic Mobility
(c) The Propensity to Move
(d) Migration Into and Out of Depressed Areas
(e) The Geographic Mobility of Labor, A Summary Report

1079. Vocational Education Act of 1963, Washington, D.C., U.S. Congress, House of Representatives, Committee on Education and Labor, 1963, 700 pp.

Hearings before the General Subcommittee on Education of the Committee on Education and Labor, House of Representatives, 88th Congress, first session, on title v-A of H.R. 3000 and H.R. 4955, to strengthen and improve the quality of vocational education and to expand the vocational education opportunities in the nation.

1080. Impact of Automation on Employment: Hearings Before the Subcommittee on Unemployment and the Impact of Automation, Washington, D.C., U.S. Congress, House of Representatives, Committee on Education and Labor, Subcommittee on Unemployment and the Impact of Automation, 1961, 793 pp.

1081. Impact of Automation on Employment: A Report, Washington, D.C., U.S. Congress, House of Representatives, Committee on Education and Labor, Subcommittee on Unemployment and the Impact of Automation, 1961, 23 pp.

1082. The Role of Apprenticeship in Manpower Development: United States and Western Europe, Washington, D.C., U.S. Congress, Senate, Committee on Labor and Public Welfare, Subcommittee on Employment and Manpower, Vol. 3

Selected readings in employment and manpower.

1083. Career Service Opportunities in the U.S. Department of Agriculture, Agricultural Handbook 45, Washington, D.C., U.S. Dept. of Agriculture, 1960, 63 pp.

Discusses opportunities for employment in scientific, technical, professional, and administrative occupations in this department. Describes the nature and location of jobs. Discusses salaries and special benefits for selected occupations.

1084. Students...Start Your Career in the Soil Conservation Service Before Your Graduate, Miscellaneous Publication No. 714, Washington, D.C., U.S. Dept. of Agriculture, Soil Conservation Service, 1960

Explains the student trainee program, including training, work experience, and how to become a trainee. Describes briefly the jobs of soil conservationist, engineer, soil scientist, woodland conservationist, agricultural economist, agronomist, and biologist.

1085. Catalog of United States Census Publications, Washington, D.C., U.S. Dept. of Commerce, Bureau of the Census

Published quarterly. Lists each of the many U.S. Census of Population publications and gives ordering and price information.

1086. Part IV of Illinois, 1958 Census of Manufactures, Publication M C58(3)-12, Washington, D.C., U.S. Dept. of Commerce, Bureau of the Census

1087. County Business Patterns, Washington, D.C., U.S. Dept. of Commerce, Bureau of the Census

Published every 2-3 years and contains data for the first quarter of the year of publication. The most recent issue contains data for the first quarter of 1962. Published in 10 parts: U.S. summary and 9 geographic regions.

1088. Industry Group by Occupation: 1960, U.S. Census of Population: 1960, Supplementary Reports, PC(S1)-27, Washington, D.C., U.S. Dept. of Commerce, Bureau of the Census, November 21, 1962, 8 pp.

Gives the number of workers employed in each industry group, by occupation and sex, 1960.

1089. Industry of the Experienced Labor Force: 1960, U.S. Census of Population: 1960, Supplementary Reports, PC(S1)-33, Washington, D.C., U.S. Dept. of Commerce, Bureau of the Census, December 18, 1962, 9 pp.

Presents data on the number of employed workers by industry of employment, race, and sex, 1960. Gives unemployment rates and ranges of earnings of workers, by industry, race, and sex, 1959.

1090. Occupations of the Experienced Civilian Labor Force and the Labor Reserve: 1960, U.S. Census of Population: 1960, Supplementary Reports,PC(S1)-40, Washington, D.C., U.S. Dept. of Commerce, Bureau of the Census, December 31, 1962, 18 pp.

Reports the number of workers employed in each occupation, 1950 and 1960, by sex. Gives unemployment rates and ranges of earnings for each occupation, by race and sex, 1960.

1091. Catalog of United States Census Publications, Washington, D.C., U.S. Dept. of Commerce, Bureau of the Census, 1963, 154 pp.

The U.S. Department of Commerce, Bureau of the Census has published an annotated catalog of its statistical publications.

1092. Guide to Information Sources for Education in Distribution, Washington, D.C., U.S. Dept. of Commerce, Business and Defense Services Administration, 1961, 33 pp.

A guide to materials and other information sources about training in occupations in distributive fields such as retail and wholesale trade. Lists related directories, bibliographies, and catalogs.

1093. "Communication--Electronics," Published in High School News Service Report, Washington, D.C., U.S. Department of Defense, May 1963

Discusses the work of the Marine Corps communications technicians--the men who operate and maintain electronic communications systems. Describes training programs and fields of specialization.

1094. Army Occupations and You, Washington, D.C., U.S. Dept. of Defense, Dept. of the Army, 1962, 160 pp.

A career handbook composed of occupational briefs describing occupations and training programs for enlisted men. Military occupations are related to civilian occupations.

1095. United States Air Force Occupational Handbook, Washington, D.C., U.S. Dept. of Defense, USAF, 1962, 200 pp.

This is a career handbook composed of occupational briefs describing occupations and training programs for enlisted men. Military occupations are related to civilian occupations.

1096. United States Navy Occupational Handbook, Washington, D.C., U.S. Dept. of Defense, USN, 1963

This is a career handbook composed of occupational briefs describing occupations and training programs for enlisted men. Military occupations are related to civilian occupations.

1097. Education and Training, The Bridge Between Man and His Work, Washington, D.C., U.S. Dept. of Health, Education and Welfare, April 1, 1965, 61 pp.

1098. "Patterns for Progress in Aging," Study No. 7, A Vocational Counseling Program for Older Workers, Washington, D.C., U.S. Dept. of Health, Education and Welfare, Office of Aging, 1961, 22 pp.

This is a case study which provides an account of the nature, history, and development of a vocational counseling program and its impact on older people.

1099. "Patterns for Progress in Aging," Study No. 2, A Vocational Training and Placement Program for Older Workers, Washington, D.C., U.S. Dept. of Health, Education and Welfare, Office of Aging, 1961, 10 pp.

This is a case study which provides an account of the nature, history, and development of a vocational training and placement project and its impact on older people.

1100. Administration of Vocational Education: Rules and Regulations, FS 5.123.1, rev. ed., Washington, D.C., U.S. Dept. of Health, Education and Welfare, Office of Education, 1958

1101. Directory, Teacher Trainers of Trade and Industrial Education, Washington, D.C., U.S. Dept. of Health, Education and Welfare, Office of Education, Div. of Vocational Education, 1958

1102. Technical and Vocational Education in the U.S.A.; A Bibliographical Survey, Educational studies and documents No. 36, Washington, D.C., U.S. Dept. of Health, Education and Welfare, Office of Education, UNESCO, 1959, 24 pp.

This bibliography is annotated.

1103. Trade and Industrial Education for the 1960's, OE-84001, Washington, D.C., U.S. Dept. of Health, Education and Welfare, Office of Education, 1959

1104. Electrical and Electronics Technologies: Job Descriptions and Suggested Techniques for Determining Courses of Study in Vocational Education Programs, Bull. OE 800004, Washington D.C., GPO, U.S. Office of Education, 1960, 34 pp.

1105. Electrical Technology; A Suggested 2-Year Post High School Curriculum, Area Vocational Education Program Series No. 1, Washington, D.C., GPO, Office of Education, 1960

1106. Public Vocational Education Programs: Characteristics of Programs Under Provisions of the Federal Vocational Education Acts, OE-800007, Washington, D.C., GPO, Office of Education, 1960

1107. Retention in High Schools in Large Cities, OE-24001, Washington, D.C., GPO, Office of Education, 1960, 29 pp.

Reports on the extent of, and the reasons for, pupil dropouts in large city high schools, 1951-55.

1108. Trade and Industrial Education for Girls and Women, A Directory of Training Programs, OE-84002, Washington, D.C., GPO, USDHEW, Office of Education, 1960, 65 pp.

Lists state-approved training programs in trade, industrial, and health occupations for girls and women, by state.

1109. Achieving Quality in Technical Education, A Report of Seven Regional Conferences, Washington, D.C., GPO, USDHEW, Office of Education, 1961, 68 pp.

1110. Organized Occupational Curriculums in Higher Education, Washington, D.C., GPO, USDHEW, Office of Education, 1961

1111. Careers in Science, Mathematics and Engineering, OE-26007, Bull. No. 8, Washington, D.C., GPO, USDHEW, Office of Education, 1962, 39 pp.

A bibliography of selected free or inexpensive career publications dealing with the sciences, mathematics, and engineering.

1112. Mechanical Technology: Design and Production, Tech. Ed. Program Series No. 3, Washington, D.C., GPO, USDHEW, Office of Education, 1962

A suggested two-year post-high school curriculum.

1113. Occupational Criteria and Preparatory Curriculum Patterns in Technical Education Programs, OE-80015, Washington, D.C., GPO, USDHEW, Office of Education, 1962

1114. Preparatory Trade and Industrial Training Programs in Public Schools, A Directory: 1961-62, OE-84028-62, Washington, D.C., GPO, USDHEW, Office of Education, 1962, 272 pp.

Lists programs, by state and city, school, and type of program. Denotes whether courses are available for high school pupils and/or adults.

1115. Selected Aerospace Career and Scholarship Information, Washington, D.C., GPO, USDHEW, Office of Education, 1962, 15 pp.

Bibliography of career materials pertaining to aviation and space-related fields. Lists sources of scholarships, fellowships, and loans.

1116. Teaching as a Career, OE-26014, Washington, D.C., GPO, USDHEW, Office of Education, 1962, 32 pp.

Designed to interest men and women in careers in the field of education. Discusses the nature of teaching; attributes of good teachers; teaching fields such as elementary grades and exceptional children; and education and certification requirements. Lists sources of additional information.

1117. Digest of Annual Reports of State Boards of Vocational Education, Fiscal Year Ended June 30, 1962, OE-80008-62, Washington, D.C., GPO, USDHEW, Office of Education, 1963

1118. Education for a Changing World of Work: Report of a Panel of Consultants on Vocational Education, OE-80021, Washington, D.C., GPO, USDHEW, Office of Education, 1963, 296 pp.

Evaluates federal, state, and local vocational and technical education programs in terms of how well they meet the current and anticipated educational and training requirements of workers. Recommends program changes to cope with the changing world of work. Includes an extensive bibliography.

1119. Publications of the Office of Education, OE-11000C, Bull. 1963, No. 29, Washington, D.C., GPO, USDHEW, Office of Education, 1963, 76 pp.

The Office of Education has published an annotated list of publications in stock or in press as of June 1963 and available for sale to the public through the U.S. Government Printing Office.

1120. Report of the Secretary of Health, Education, and Welfare to the Congress on Training Activities Under the Manpower Development and Training Act, OE-80027, Washington, D.C., GPO, USDHEW, Office of Education, 1963, 90 pp.

Includes a preliminary assessment of training program data and a discussion of immediate and long-range research needs. Appendixes provide a digest of recommendations made by an Advisory Panel of Consultants on Vocational Education and appropriation features of the proposed Vocational Education Act of 1963.

1121. Training Activities Under the Manpower Development and Training Act, Washington, D.C., GPO, USDHEW, Office of Education, 1963, 63 pp.

Discusses training programs set up under the act, including size of programs, personal characteristics of trainees, nature of training, and post-training work experiences of trainees. Discusses some future directions of training programs.

1122. "Training for a Job Under MDTA," Published in School Life, Washington, D.C., GPO, USDHEW, Office of Education, February 1963, pp. 17-22

1123. Education and Training: Key to Development of Human Resources, OE-87030, Washington, D.C., GPO, USDHEW, Office of Education, 1964, 50 pp.

Previews and evaluates the programs set up under the Manpower Development and Training Act. Describes the characteristics of trainees, courses of instruction, training facilities, training costs, experimental and demonstration projects, and related subjects. Discusses the need to continue the manpower training program and steps that can be taken to make the program more effective. Includes statistical appendixes.

1124. Patterns of Research in Distributive Education, Washington, D.C., USDHEW, Office of Education, Div. of Vocational Education, 1962, 25 pp.

1125. Manpower, Challenge of the 1960's, Washington, D.C., GPO, U.S. Dept. of Labor, 1961

1126. Occupational Training and Retraining Under the Area Redevelopment Act, Washington, D.C., GPO, U.S. Dept. of Labor, 1961, 9 pp.

Discusses the provisions of the act that refer to training and retraining of workers. Explains how a training program is developed.

1127. Manpower Report of the President and a Report on Manpower Requirements, Resources, Utilization, and Training, Transmitted to the Congress, March 1963, Washington, D.C., GPO, U.S. Dept. of Labor, 1963, 204 pp.

Reports on the many factors affecting manpower requirements, resources, utilization, and training. Provides a major contribution to an understanding of the vital role of manpower in our economy. Discusses growth and composition of population, employment trends by occupations and industries, mobility of workers, worker productivity and product demand, and anticipated changes affecting the manpower picture in the future. Includes an extensive statistical appendix.

1128. Publications of the U.S. Department of Labor, Subject Listing, 1958 to June 1963, Washington, D.C., GPO, Department of Labor, 1963

The U.S. Department of Labor publishes each year a list of its recent publications.

1129. Manpower Report of the President and a Report on Manpower Requirements, Resources, Utilization, and Training, Transmitted to the Congress, March 1964, Washington, D.C., GPO, U.S. Dept. of Labor, 1964, 279 pp.

Reports on technological innovations and related trends in productivity and employment and on the first national survey of the training of American workers. Discusses the educational attainment of the labor force and the problems of disadvantaged workers--rural workers, Negroes and other minority groups, younger workers, and older workers. Discusses the impact of government expenditures and employment on manpower requirements. Includes an extensive statistical appendix.

1130. Apprenticeship and Economic Change, Apprenticeship and Unemployment, and Number of Apprentices, Technical Report 2, Washington, D.C., U.S. Dept. of Labor, Bureau of Apprenticeship and Training

1131. "Classification of Training Programs," Reprint from Training of Workers in American Industry, Washington, D.C., U.S. Dept. of Labor, Bureau of Apprenticeship and Training

1132. Training of Workers in American Industry, Research Division Report No. 1, Washington, D.C., U.S. Dept. of Labor, Bureau of Apprenticeship and Training

1133. Career Patterns of Former Apprentices, Bulletin No. T-147, Washington, D.C., U.S. Dept. of Labor, Bureau of Apprenticeship and Training, 1959, 21 pp.

Reports on the status of apprentices 6 years after completing their training. Traces the occupational mobility and changing economic status of apprentice-trained workers.

1134. Apprenticeship and Training in Carpentry Construction, Bulletin T-153, Washington, D.C., U.S. Dept. of Labor, Bureau of Apprenticeship and Training, 1962, 56 pp.

Reports on the scope of carpenter apprenticeship among unionized firms in building construction. Gives apprentice training figures by state. Concludes that within most regions and states, the number of apprentices in training is inadequate to meet future needs.

1135. The National Apprenticeship Program, Washington, D.C., GPO, U.S. Dept. of Labor, Bureau of Apprenticeship and Training, 1962

1136. The Bureau of Apprenticeship and Training, Washington, D.C., U.S. Dept. of Labor, Bureau of Apprenticeship and Training, Reprinted 1963, 8 pp.

Describes the nature and purpose of the national apprenticeship program and the functions of the Bureau of Apprenticeship and Training. Lists regional offices of the Bureau.

1137. Bureau of Apprenticeship and Training Publications, Washington, D.C., U.S. Dept. of Labor, Bureau of Apprenticeship and Training, 1963

1138. Careers in Apprenticeship, Washington, D.C., U.S. Dept. of Labor, Bureau of Apprenticeship and Training, 1963, 10 pp. (Issued jointly with USDHEW, Office of Education)

Describes apprenticeship training to high school pupils and counselors. Lists apprenticeable trades and sources of additional information.

1139. Area Labor Market Trends, Washington, D.C., U.S. Dept. of Labor, Bureau of Employment Security (Monthly publication)

This publication reports the adequacy of the labor supply in 150 major labor market areas, and a number of smaller ones, and classifies each area into 1 of 6 categories ranging from labor shortage to high unemployment. Issues of the periodical for odd-numbered months present a roundup of area labor market developments and employment outlook for selected industries and occupations.

1140. Career Guide for Demand Occupations, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Employment Security, 1959, 33 pp.

Discusses occupations in current and anticipated short supply that require pre-employment training. Gives required high school subjects; helpful personal characteristics such as interest, temperament, and physical condition; and types of pre-employment education and training needed.

1141. Industry Manpower Surveys:
  No. 91--Furniture, May 1959
  No. 92--Household appliances, June 1959
  No. 94--Newspapers and commercial printing, Dec. 1959
  No. 97--Petroleum refining, Dec. 1960
  No. 98--Computing machines, Jan. 1961
  No. 100--Blast furnaces, steel works, and rolling mills, May 1961
  No. 103--Telephone communication, May 1962

No. 104--Footwear, Sept. 1962
No. 105--Missiles, spacecraft, and aircraft, May 1963
No. 107--Tires and tubes, no date
No. 108--Meatpacking, no date
No. 109--Department stores, no date
No. 110--Machine tools, no date
No. 111--Aerospace employment, no date
Washington, D.C., U.S. Dept. of Labor, Bur. of Employment Security

1142. Handbook on Sources of Data for Manpower Projections, Washington, D.C., U.S. Dept. of Labor, Bur. of Employment Security, Office of Program Review and Analysis, 1961

1143. Technical Occupations in Research, Design, and Development Considered as Directly Supporting to Engineers and Physical Scientists, No. E-194, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Employment Security, 1961, 113 pp.

Describes jobs that directly support engineers and physical scientists in research, design, and development activities. Includes bibliography.

1144. Area Redevelopment Manpower Report--1962-Mid-1964
Pittsburgh, Pa., 1963, 11 pp.
South Bend, Ind., 1962, 8 pp.
New Bedford, Mass., 1963, 10 pp.
Providence-Pawtucket, R.I.-Mass., 1963, 10 pp.
Detroit, Mich., 1963, 11 pp.
Huntington-Ashland, W. Va.-Ky.-Ohio, 1963, 10 pp.
Fall River, Mass.-R.I., 1964, 9 pp.
Duluth, Minn.-Wis., 1964,10 pp.
Washington, D.C., U.S.Dept. of Labor, Bur. of Employment Security

The U.S. Employment Service, in cooperation with the U.S. Department of Commerce, Area Redevelopment Administration, publishes a series of reports that provide employment information on labor market areas with substantial and persistent unemployment. Each report includes a description of the area, its economic and manpower characteristics, the nature of local unemployment problems, and a summary of recent labor market developments and outlook. The reports in this series that were published in 1962-mid-1964 are listed above. Counselors may obtain free copies of these reports from the U.S. Department of Labor, Manpower Administration, Bureau of Employment Security, while the supply lasts.

1145. Choosing Your Occupation, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Employment Security, 1962, 16 pp.

Guides the prospective worker in choosing an occupational field to fit his aptitudes and interests.

1146. "Meeting the Manpower Problems of: I. Area Redevelopment. II. Automation," Employment Security Review, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Employment Security, July 1962, pp. 3-44

Part I includes an analysis of the ARA training program by USES Director, Louis Levine, and contains articles on specific state programs. Part II contains (1) a discussion of the role of the Bureau of Employment Security in automation by Administrator Robert C. Goodwin; (2) a description of community and worker response to layoffs resulting from the mechanization of a meatpacking plant in Omaha; (3) discussions of Pennsylvania's program to establish studies of automation.

1147. Bureau of Employment Security Publications, BES No. G-219, Washington, D.C., U.S. Dept. of Labor, Bur. of Employment Security, June 1963, 37 pp.

This bibliography lists the Bureau's free and priced publications, including periodicals. Citations are grouped under broad subject headings as follows: General publications, employment service publications, and unemployment insurance publications. Employment service publications are subdivided into the following categories: Occupational information, tests and measurements, counseling, service to older workers, service to the handicapped job applicant, labor market information, and farm labor. Includes information on how to obtain the Bureau's publications.

1148. Job Guide for Young Workers, 1963-64 Edition, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Employment Security, 1963, 78 pp.

Supplies young workers with information on 90 different entry jobs. Discusses working conditions, training and other requirements, avenues of advancement, employment prospects, and location of jobs. Gives advice on how to seek work.

1149. "The New Dictionary of Occupational Titles," advance account published in Employment Security Review, Washington, D.C., U.S. Dept. of Labor, Bureau of Employment Security, February 1963

The content and nature of the revisions in the 1965 edition of the Dictionary of Occupational Titles are described in this article.

1150. Work Force Adjustments to Technological Change, Washington, D.C., U.S. Dept. of Labor, Bur. of Employment Security, 1963, 62 pp.

A study of personnel procedures used by employers in planning and administering technological change, with specific reference to manpower planning for impending change, reassignment and relocation of workers, training programs, and minimizing income loss of displaced workers.

1151. Dictionary of Occupational Titles, 1965, 3rd ed., Washington, D.C., U.S. Dept. of Labor, Bur. of Employment Security, Office of Manpower Analysis and Utilization, Vol. I, 809 pp; Vol. II, 656 pp.

1152. Training and Reference Manual for Job Analysis, Washington, D.C., U.S. Dept. of Labor, Bur. of Employment Security

1153. Guide to Local Occupational Information, Washington, D.C., Dept. of Labor, Bur. of Employment Security, 1962, 116 pp.

1154. Career Guide for Demand Occupations, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Employment Security, 1965, 125 pp.

1155. Current Employment Conditions for Engineers, Scientists and Technical Occupations, March 1964 and August 1964, Washington, D.C., U.S. Dept. of Labor, Bur. of Employment Security

1156. Job Opportunities Information, Washington, D.C., U.S. Dept. of Labor, Bur. of Employment Security

1157. Manpower Resources, Washington, D.C., U.S. Dept. of Labor, Bur. of Employment Security

1158. "Training Needs Surveys," chapter 2, MDTA Handbook, Washington, D.C., U.S. Dept. of Labor, Bureau of Employment Security

1159. "Testing the Undereducated," Employment Service Review, Washington, D.C., U.S. Dept. of Labor, Bur. of Employment Security, January-February 1964

1160. "Typesetter: A New Job with an Old Name," Employment Service Review, Washington, D.C., U.S. Dept. of Labor, Bur. of Employment Security, July 1964

1161. "Employment Service Operating Data as a Measure of Job Vacancy," Employment Service Review, Washington, D.C., U.S. Dept. of Labor, Bur. of Employment Security, April 1965

1162. Design for Community Action: How To Mobilize Community Resources To Help Youth Enter the World of Work, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Standards

1163. School...Or What Else?, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Standards, 1962, 11 pp.

Provides effective arguments to dissuade the potential dropout from leaving school. Explains the importance of a high school education. Contrasts types of jobs and earnings of school dropouts and high school graduates. Suggests ways of going about getting part-time work.

1164. Case Studies of Displaced Workers, Bull. 1408, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics

1165. A Case Study of an Automatic Airline Reservation System, Report 137, Study of Automatic Technology, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics

This study describes changes and implications for productivity, employment, occupational requirements, and industrial relations in a plant introducing automation.

1166. A Case Study of a Company Manufacturing Electronic Equipment, Study of Automatic Technology, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics

See annotation for entry No. 1165.

1167. A Case Study of a Large Mechanized Bakery, Report 109, Study of Automatic Technology, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics

See annotation for entry No. 1165.

1168. A Case Study of a Modernized Petroleum Refinery, Report 120, Study of Automatic Technology, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics

See annotation for entry No. 1165.

1169. Educational Attainment of Workers, March 1964, Labor Force Report 53, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics

1170. Employment and Earnings Statistics for the United States 1909-1964, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, Bull. 1312-2

1171. Estimated Labor Requirements for Skilled Workers, 1963-1975, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics

1172. Geographic Mobility and Employment Status, March 1962-March 1963, Labor Force Report 44, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics

1173. The Introduction of an Electronic Computer in a Large Insurance Company, Study of Automatic Technology, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics

This study describes changes and implications for productivity, employment, occupational requirements, and industrial relations in a plant introducing automation.

1174. Scientists, Engineers, and Technicians in the 1960's--Requirements and Supply, NSF 63-34, Washington, D.C., Dept. of Labor, Bur. of Labor Statistics

1175. Working Paper on the Supply of Scientists and Engineers in the United States, 1962-1970, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics

1176. Adjustments to the Introduction of Office Automation, Bull. No. 1276, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, May 1960, 87 pp.

Reports on worker adjustments to the installation of electronic data processing in a number of offices. Discusses displacement, reassignment, retraining, and changes in the status of workers.

1177. "Geographic Mobility of Young Workers," Occupational Outlook Quarterly, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, September 1960, pp. 3-6

Discusses the concept of labor mobility. Describes who moves and their reasons for moving.

1178. Impact of Automation, Bull. No. 1287, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, November 1960, 114 pp.

A collection of 20 articles reprinted from the Monthly Labor Review. Discusses such subjects as the effects of technological change on labor's long-run objectives, industrial relations, and the social and economic status of workers.

1179. Labor Supply and Mobility in a Newly Industrialized Area, Bull. No. 1261, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, February 1960, 47 pp.

Reports on the economic and personal characteristics of workers attracted to manufacturing employment in a chronically depressed area. Discusses such factors as wages, educational achievement, previous work experience, and reasons for mobility.

1180. "Unemployment and Job Mobility," Monthly Labor Review, Washington, D.C., GPO, Labor Force Report No. 3, Reprint No. 2335, U.S. Dept. of Labor, Bur. of Labor Statistics, April 1960, pp. 350-8

Reports on the influence of worker mobility on unemployment rates. Discusses personal characteristics, occupation, and motivations of job changers.

1181. Employment in the Atomic Energy Field, Bull. No. 1297, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, April 1961, 36 pp.

1182. From School to Work: The Early Employment Experience in Seven Communities, 1952-1957, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, 1961

1183. The Long-Range Demand for Scientific and Technical Personnel, A Methodological Study, NSF 61-65, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, 1961

1184. Scientific and Technical Personnel in Industry, NSF 61-75, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, 1961

1185. Technological Change and Productivity in the Bituminous Coal Industry, 1920-1960, Bull. No. 1305, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, 1961, 133 pp.

1186. "White-Collar Employment: Trends and Structure: Characteristics," Monthly Labor Review, Labor Force Report No. 12, Reprint No. 2363, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, January 1961, pp. 11-18

Reports on recent growth in white-collar employment in comparison with long-term trends. Compares employment levels, educational attainment, income levels, and industrial patterns of employment of white-collar, blue-collar, and service workers.

1187. "Automation: Its Implications for Counseling," Occupational Outlook Quarterly, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, September 1962, pp. 3-6

Discusses the implications of mechanization and automation for guidance counselors.

1188. Employment Opportunities in the Atomic Energy Field, TID-14314, Prepared for Div. of Labor Relations, U.S. Atomic Energy Comm., Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, April 1962, 48 pp.

Describes more than 30 occupations in the atomic energy field.

1189. Impact of Technological Change and Automation in the Pulp and Paper Industry, Bull. No. 1347, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, October 1962, 92 pp.

Surveys the nature, status and outlook of technological innovations and implications for productivity, production, employment, occupational requirements, and industrial relations practices. Includes case studies of three different types of technological innovations.

1190. Implications of Automation and Other Technological Developments, Bull. No. 1319, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, 1962, 136 pp.

A selected annotated bibliography of materials related to the impact of technological change. Publications issued from 1956 to 1961 are covered.

1191. Interim Revised Projections of U.S. Labor Force, 1965-75, Labor Force Report No. 24, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, 1962

1192. "The Occupational Structure of U.S. Employment, 1940-60," Monthly Labor Review, Reprint No. 2403, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, November 1962, pp. 1209-13

Reports on the changing occupational structure of the labor force. Shows employment trends for occupational groups and some individual occupations.

1193. Publications on Scientific and Technical Manpower, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, 1962

A bibliography of manpower surveys and studies.

1194. The Relationship Between Imports and Employment, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, April 1962, 143 pp.

A statistical study of the relationship between imports and employment in 27 import-competing industries, 1954-59. Includes a detailed report on the wallpaper, and pottery and chinaware industries.

1195. A Directory of...Community Wage Surveys 1948--June 1963, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, 1963, 27 pp.

A directory of occupational wage and supplementary benefits surveys conducted each year for major labor market areas. Each survey report includes job descriptions for occupations included in the survey.

1196. "Educational Attainment of Workers, March 1962," Monthly Labor Review, Labor Force Report No. 30, Reprint No. 2416, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, May 1963, pp. 504-15

Reports on recent trends in the educational attainment of workers and the relationship of educational attainment to occupation, employment, and income. Compares the changing educational attainment of groups in the labor force such as married women, and adults 25-29 years of age.

1197. Employment and Changing Occupational Patterns in the Railroad Industry, 1947-60, Bull. 1344, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, February 1963, 32 pp. Summary in Monthly Labor Rev., October 1962, pp. 1129-35

1198. "Employment of High School Graduates and Dropouts in 1962," Monthly Labor Review, Labor Force Report No. 32, Reprint No. 2414, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, July 1963, pp. 772-9

Compares unemployment rates and occupations of high school graduates and dropouts. Emphasizes the special problems of nonwhite graduates and dropouts when first entering the labor force.

1199. "Employment of School-Age Youth, October 1962," Monthly Labor Review, Labor Force Report No. 34, Reprint No. 2420, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, August 1963, pp. 907-13

Reports on the continuing high unemployment rates for the out-of-school worker, age 16 to 21. Presents statistics on labor force participation, unemployment, and industries and occupations in which the nation's youth are employed. Points out the social and economic problems of unemployed youths.

1200. Employment Outlook and Changing Occupational Structure in Electronics Manufacturing, Bull. No. 1363, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, October 1963, 61 pp.

1201. "Employment Projections to 1975," Monthly Labor Review, Labor Force Report No. 28, Reprint No. 2412, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, March 1963, pp. 240-8

Assesses the economy's prospective manpower needs and skill requirements. Projects employment growth by major industry and occupational group.

1202. "Geographic Changes in U.S. Employment from 1950 to 1960," Monthly Labor Review, Reprint No. 2411, Washington, D.C., U.S.Dept. of Labor, Bur. of Labor Statistics, January 1963, pp. 1-10

Discusses state and regional changes in employment from 1950 to 1960, by broad occupational group.

1203. Implications of Automation and Other Technological Developments, Bull. No. 1319-1, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, December 1963, 90 pp.

This annotated bibliography is a supplement to BLS Bulletin No. 1319 published in February 1962. This supplement cites references published mainly between the latter part of 1961 and early 1963.

1204 Income, Education, and Unemployment in Neighborhoods--Chicago, Ill., Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, 1963, 91 pp.

The U.S. Department of Labor, Bureau of Labor Statistics, has published statistical studies of 36 cities that provide information on population, male civilian labor force, high school enrollment, educational attainment, income level, and unemployment, by ethnic group and neighborhood. Based on data collected during the 1960 Census of Population, these studies were made to help meet the needs of the President's Committee on Youth Employment for information on areas where environmental factors could be associated with disadvantaged youth. These studies were prepared for cities with populations of 500,000 or more, in addition to a few smaller cities. Studies of the following cities are also available:

Atlanta, Ga.
Baltimore, Md.
Birmingham, Ala.
Boston, Mass.
Buffalo, N. Y.
Cincinnati, Ohio
Cleveland, Ohio
Dallas, Tex.
Denver, Colo.
Detroit, Mich.
Houston, Tex.
Indianapolis, Ind.
Kansas City, Mo.
Los Angeles, Calif.
Memphis, Tenn.
Milwaukee, Wis.
*Minneapolis-St. Paul, Minn.
Newark, N. J.
New Orleans, La.
**New York, N. Y.
Oakland, Calif.
Oklahoma City, Okla.
Philadelphia, Pa.
Phoenix, Ariz.
Pittsburgh, Pa.
St. Louis, Mo.
San Antonio, Tex.
San Diego, Calif.
San Francisco, Calif.
San Juan, P. R.
Seattle, Wash.
*Tampa-St. Petersburg, Fla.
Washington, D.C.

*Both cities in one report.
**Each of five boroughs is shown in a separate report.

1205. Industrial Retraining Programs for Technological Change, A Study of the Performance of Older Workers, Bull. No. 1368, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, June 1963, 34 pp.

A study of the types of technological change that give rise to the need for retraining in industry, and the effectiveness with which displaced older workers adapt to such retraining.

1206. "Labor Force and Employment, 1960-62," Monthly Labor Review, Labor Force Report No. 31, Reprint No. 2417, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, May 1963, pp. 497-503

Reports on trends in labor force participation for some population groups such as teenage boys, older men, men 20-54, and adult women. Discusses industries that are hiring the bulk of new labor force entrants. Contains a special section on employed and unemployed workers.

1207. Occupational Outlook Briefs, 9 reprints from Bull. No. 1375, Occupational Outlook Handbook, 1963-64 Edition, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics

Reprints of statements on the occupational outlook in the major broad occupation groups. Single copies are available from BLS as long as supplies last. Titles of the briefs are as follows:

Business Administration and Related Professions, 3 pp.
Clerical and Related Occupations, 3 pp.
Health Service Occupations, 2 pp.
Professional, Administrative, and Related Occupations, 5 pp.
Protective Service Occupations, 1 p.
Sales Occupations, 3 pp.
Semiskilled and Unskilled Workers, 3 pp.
Service Occupations, 3 pp.
Skilled Workers, 3 pp.

1208. Occupational Outlook Report Series, 109 reprints from Bull. No. 1375, Occupational Outlook Handbook, 1963-64 Edition, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics

Many reprints out of print; reprints from 1966-67 Handbook now available. Selected examples include

Agricultural Occupations, Bull. No. 1375-86, 18 pp.
Air-Conditioning and Refrigeration Mechanics, Bull. No. 1375-73, 3 pp.
Aircraft, Missile, and Spacecraft Manufacturing Occupations, Bull. No. 1375-87, 10 pp.
Apparel Industry, Bull. No. 1375-88, 9 pp.
Appliance Servicemen, Bull. No. 1375-74, 4 pp.
Automobile Mechanics and Diesel Mechanics, Bull. No. 1375-75, 7 pp.
Baking Industry, Bull. No. 1375-90, 7 pp.
Barbers and Beauty Operators, Bull. No. 1375-47, 5 pp.
Bookkeeping Workers and Office Machine Operators, Bull. No. 1375-48, 6 pp.
Bricklayers, Stonemasons, Marble Setters, Tile Setters, and Terrazzo Workers, Bull. No. 1375-57, 15 pp.
Business Machine Servicemen, Bull. No. 1375-76, 7 pp.
Construction Electricians and Elevator Constructors, Bull. No. 1375-59, 13 pp.
Construction Laborers and Hod Carriers, Bull. No. 1375-60, 9 pp.
Counselors: School, Rehabilitation, and Vocational, Bull. No. 1375-9, 9 pp.
Dental Hygienists, Bull. No. 1375-15, 2 pp.
Dental Laboratory Technicians, Bull. No. 1375-16, 3 pp.
Dispensing Opticians and Optical Laboratory Mechanics, Bull. No. 1375-67, 5 pp.
Driving Occupations, Bull. No. 1375-68, 20 pp.
Electric Light and Power Occupations, Bull. No. 1375-93, 13 pp.
Electronic Computer Operating Personnel and Programmers, Bull. No. 1375-50, 8 pp.

Electronics Manufacturing Occupations, Bull. No. 1375-94, 11 pp.
Electroplaters, Bull. No. 1375-69, 3 pp.
Factory Occupations Not Requiring Specialized Training, Bull. No. 1375-70, 10 pp.
Floor Covering Installers, Bull. No. 1375-61, 11 pp.
Forge Shop Occupations and Blacksmiths, Bull. No. 1375-71, 6 pp.
Government Occupations, Bull. No. 1375-96, 15 pp.
Instrument Repairmen, Bull. No. 1375-77, 4 pp.
Iron and Steel Industry, Bull. No. 1375-100, 11 pp.
Machining Occupations, Bull. No. 1375-82, 15 pp.
Maintenance Electricians, Bull. No. 1375-78, 4 pp.
Medical Technologists, Medical X-Ray Technicians, and Medical Record Librarians, Bull. No. 1375-20, 9 pp.
Millwrights and Industrial Machinery Repairmen, Bull. No. 1375-79, 5 pp.
Newspaper Reporters and Technical Writers, Bull. No. 1375-35, 6 pp.
Painters, Paperhangers, Glaziers, and Asbestos and Insulating Workers, Bull. No. 1375-62, 15 pp.
Petroleum Production and Refining Occupations, Bull. No. 1375-102, 11 pp.
Physical Therapists and Occupational Therapists, Bull. No. 1375-24, 5 pp.
Plasterers, Lathers,and Cement Masons, Bull. No. 1375-63, 15 pp.
Plumbers and Pipefitters, Bull. No. 1375-64, 11 pp.
Printing Occupations, Bull. No. 1375-83, 18 pp.
Pulp, Paper, and Paper Products Industry, Bull. No. 1375-104, 8 pp.
Technicians: Engineering, and Science Technicians, Draftsmen and Surveyors, Bull. No. 1375-45, 15 pp.
Urban Planners, Bull. No. 1375-46, 4 pp.
Welders, Oxygen and Arc Cutters, and Boilermaking Occupations, Bull. No. 1375-85, 7 pp.

1209. Bureau of Labor Statistics Catalog of Publications, January-June 1964, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, 1964

1210. Choosing a Career--The Economic Framework, Bull. No. 1375-A, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, 1964, 17 pp.

Discusses, in nontechnical language, expected population and labor force growth and the changing occupational structure of the economy, and their implications for education, training, and future employment opportunities. Directed to counselors, parents, teachers, and others who assist young people in making vocational choices.

1211. Conducting a Labor Force Survey in Developing Countries, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, 1964, 177 pp.

1212. Counselor's Guide to Occupational and Other Manpower Information, Bull. No. 1421, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, November 1964, 87 pp.

An annotated bibliography of selected government publications concerned with occupational information.

1213. Employment and Earnings Statistics for States and Areas, 1939-1963, Bull. No. 1370-1, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, 1964, 692 pp.

1214. Employment Outlook for 1964 Graduates of 2-Year College Programs, Dept. of Labor News Release No. 6223, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, June 11, 1964

1215. Employment Requirements and Changing Occupational Structure in Civil Aviation, Bull. No. 1367, Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, June 1964, 55 pp.

1216. Factbook on the School Dropout in the World of Work, Revised 1964, New York, U.S. Dept. of Labor, Bur. of Labor Statistics, Middle Atlantic Region, 19 pp.

Portrays the dropout in today's world of work, using graphs and tables. Compares rates of unemployment and lifetime earnings of school dropouts and graduates. Presents information on some characteristics of dropouts.

1217. Foreign Languages and Your Career, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, 1964

Discusses careers in which knowledge of a foreign language is either essential or a handy extra tool. Lists OOH reprints describing job opportunities where a foreign language is helpful.

1218. List of Occupational Outlook Publications, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, 1964

1219. Mathematics and Your Career, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, 1964

Explains the importance of training in mathematics for high school and college students. Tells how to find out whether mathematics is needed for a given career field. Lists OOH reprints describing job opportunities in occupations that require training in mathematics.

1220. "A New Look at Manpower Needs in Teaching," Occupational Outlook Quarterly, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, May 1964

1221. Science and Your Career, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, 1964

Explains the importance of training in the sciences for high school and college students. Tells how training fits into different careers and how to find out whether science is needed for a given career. Lists OOH reprints containing information on careers requiring training in science.

1222. Social Science and Your Career, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, 1964

Discusses careers open to students of social science, and the value of social science courses in many occupations not directly related to the subject. Lists the OOH reprints describing job opportunities in the field.

1223. Technological Trends in 36 Major American Industries, Prepared for the President's Comm. on Labor-Management Policy, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, 1964, 105 pp.

1224. "Labor Force Projections 1970-80," Monthly Labor Review, Labor Force Report No. 49, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, February 1965

1225. Occupational Outlook Handbook; Employment Information on Major Occupations for Use in Guidance, 1966-67 ed., Washington, D.C., GPO, U.S. Dept. of Labor, Bur. of Labor Statistics, 1965, 858 pp.

This handbook presents information on nearly 700 occupations and is a valuable tool for aiding those who are concerned with guiding young people in making a career choice.

1226. Outlook for Numerical Control of Machine Tools, Bull. No. 1437, Washington, D.C., U.S. Dept. of Labor, Bur. of Labor Statistics, 1965, 63 pp.

1227. Job Changing and Manpower Training, Manpower Report 10, Washington, D.C., U.S. Dept. of Labor, Office of Manpower, Automation and Training

1228. Farm Families, Youths, Operators, Workers and the Manpower Development and Training Act, Washington, D.C., U.S. Dept. of Labor, OMAT, 1962, 8 pp.

Discusses application of the Manpower Development and Training Act to farm workers. Describes training programs, travel, and living allowances under the act.

1229. Training for Jobs in Redevelopment Areas, Washington, D.C., U.S. Dept. of Labor, OMAT, 1962, 36 pp.

Reports on some major accomplishments of occupational training programs set up under the Area Redevelopment Act of 1961. Discusses anticipated projects.

1230. Trends in Farm Employment and Training Needs, Washington, D.C., Manpower Report No. 3, U.S. Dept. of Labor, OMAT, 1962, 4 pp.

Discusses farm population and employment trends. Emphasizes the anticipated effects of technological improvements on employment prospects.

1231. Industry Employment Growth Since World War II, Manpower Report No. 5, Washington, D.C., U.S. Dept. of Labor, OMAT, 1963, 6 pp.

Surveys postwar employment growth, by industry, and includes information on changing blue- and white-collar occupational patterns for several industries.

1232. Manpower and Training...Trends...Outlook...Programs, Manpower Res. Bull. No. 2, Washington, D.C., U.S. Dept. of Labor, OMAT, 1963, 26 pp.

Describes programs to retrain workers displaced by technological change. Reviews population and labor force participation trends, and discusses the personal characteristics of the unemployed and the changing occupational and industrial composition of employment.

1233. Mobility and Worker Adaptation to Economic Change in the United States, Manpower Res. Bull. No. 1, Revised 1963, Washington, D.C., U.S. Dept. of Labor, OMAT, 77 pp.

Reports on the contributions that policy, programs, and techniques concerning manpower, employment, and social affairs can make for the promotion of economic growth and other objectives. Discusses underemployment, including part-time employment; unemployment, nonparticipation in the labor market; current labor mobility; education and training; and labor-market organization.

1234. People, Skills, and Jobs; Highlights from the Manpower Report of the President, Washington, D.C., U.S. Dept. of Labor, OMAT, 1963, 29 pp.

Illustrates with graphs the manpower problems and prospects explained in the first Manpower Report of the President.

1235. Selected Manpower Indicators for States, Manpower Res. Bull. No. 4, Washington, D.C., U.S. Dept. of Labor, OMAT, 1963, 52 pp.

Shows variations, as well as relationships, among states on several basic manpower subjects, including employment, unemployment, educational attainment, the nonwhite population, the proportion of workers in white-collar jobs, income, and population and labor force growth to 1970.

1236. Training Disadvantaged Groups Under the Manpower Development and Training Act, Evaluation Report No. 1, Washington, D.C., U.S. Dept. of Labor, OMAT, 1963, 24 pp.

Evaluates the extent to which training programs are meeting the need for marketable skills among disadvantaged groups, including youth, nonwhite, undereducated, and older workers. (First in a series of reports evaluating MDTA training programs.)

1237. Young Workers: Their Special Training Needs, Manpower Res. Bull. No. 3, Washington, D.C., U.S. Dept. of Labor, OMAT, 1963, 19 pp.

Reviews the problems of youths seeking jobs, including inadequate education and training. Discusses special problems of Negro youths, juvenile delinquents, youths from low-income families, handicapped youths, rural youths, and school dropouts. Gives statistics on youths in the labor force, by state in 1960, and projections to 1965 and 1970.

1238. Report of the Secretary of Labor on Research and Training in Accordance with Section 309 of the Manpower Development and Training Act, Transmitted to Congress, March 1964, Washington, D.C., GPO, U.S. Dept. of Labor, OMAT, 1964, 193 pp.

Provides a continuation of the review and evaluation of programs and progress made under MDTA, as reported in the 1963 edition. Includes statistical appendixes.

1239. The Challenge of Jobless Youth, Washington, D.C., U.S. Dept. of Labor, President's Comm. on Youth Employment, April 1963, 20 pp.

Presents the Committee's recommendations for reducing the rate of unemployment among youths. Recommends separate programs on federal, state, and local levels. Presents statistics on youth employment, by race and sex, and by high school graduates and school dropouts.

1240. Reports of Subcommittees of the President's Committee on Youth Employment, Washington, D.C., U.S. Dept. of Labor, President's Comm. on Youth Employment, 1963

1241. Clerical Occupations for Women--Today and Tomorrow, Bull. 289, Washington, D.C., U.S. Dept. of Labor, Women's Bur.

1242. Today's Woman in Tomorrow's World, Report of Conference Commemorating the 40th Anniversary of the Women's Bureau, June 2 and 3, 1960, Washington, D.C., GPO, U.S. Dept. of Labor, Women's Bur., Bull. No. 276, 138 pp.

Reports opinions of conference speakers and panelists on the expected problems of women workers in tomorrow's world. Discusses special training and educational requirements, family responsibilities, and job discrimination.

1243. Who Are the Disadvantaged Girls 16-21 Years Old?, Washington, D.C., U.S. Dept. of Labor, Women's Bur.

1244. Women in Poverty, Washington, D.C., U.S. Dept. of Labor, Women's Bur.

1245. Careers for Women in Retailing, Bull. No. 271, Washington, D.C., GPO, U.S. Dept. of Labor, Women's Bur., 1959, 52 pp.

Discusses job opportunities for women in the retailing industry, with emphasis on opportunities in department and specialty stores. Describes some desirable personal qualities and educational requirements. Includes bibliography.

1246. Science Futures for Girls, Leaflet No. 32, Washington, D.C. GPO, U.S. Dept. of Labor, Women's Bur., 1959

Discusses careers for women that require science backgrounds.

1247. Careers for Women as Technicians, Bull. No. 282, Washington, D.C., GPO, U.S. Dept. of Labor, Women's Bur., 1961, 28 pp.

Designated to acquaint counselors, parents, and young women with the abundance of employment opportunities for women and girls in technical occupations. Discusses where women technicians are employed, and their personal characteristics, training requirements, and earnings.

1248. Memo To: Communities Re: The Nurse Shortage, Leaflet No. 29, Washington, D.C., GPO, U.S. Dept. of Labor, Women's Bur., 1961

Describes methods by which communities can increase their supply of nurses. Discusses typical salaries, working conditions, financial aid, and experimental and refresher training programs.

1249. Training Opportunities for Women and Girls, Bull. No. 274, Washington, D.C., GPO, U.S. Dept. of Labor, Women's Bur., Reprinted 1961, 64 pp.

1250. Women in the Federal Service, 1939-1959, Pamphlet No. 4, Revised 1962, Washington, D.C., GPO, U.S. Dept. of Labor, Women's Bur., 21 pp.

Discusses the status of women workers in the Federal Service, including locations of work, grades and salaries, and occupations. Describes employment trends.

1251. Women Workers in 1960: Geographical Differences, Bull. No. 284, Washington, D.C., GPO, U.S. Dept. of Labor, Women's Bur., 1962, 17 pp.

Reports geographical shifts in the employment of women, 1950-60. Discusses personal, occupational, and income characteristics of women workers.

1252. Handbook of Women Workers, Bull. No. 285, Washington, D.C., GPO, U.S. Dept. of Labor, Women's Bur., 1963, 202 pp.

Presents statistical and descriptive information on the occupations, ages, marital status, earnings and income, and educational attainment of women workers. Comments on the civil and political status of women. Lists the names of professional and social organizations for women. Published biennially.

1253. Publications of the Women's Bureau, Leaflet No. 10, Washington, D.C., U.S. Dept. of Labor, Women's Bur., 1963

1254. Women Telephone Workers and Changing Technology, Bull. 286, Washington, D.C., GPO, U.S. Dept. of Labor, Women's Bur., 1963, 46 pp.

Analyzes effects of technological change on women in the telephone industry, their employment, job content, job opportunities, earnings and hours of work.

1255. Future Jobs for High School Girls, Revised ed., Washington, D.C., GPO, U.S. Dept. of Labor, Women's Bur., 1964, 64 pp.

1256. Suggestions to Women and Girls on Training for Future Employment, Leaflet No. 33, Reprinted 1964, Washington, D.C., U.S. Dept. of Labor, Women's Bur.

Discusses types of training programs available to women and girls and occupational fields for which they can obtain training.

1257. 1965 Handbook on Women Workers, Washington, D.C., U.S.Dept. of Labor, Women's Bur., 1965

1258. Education for a Changing World of Work, Washington, D.C., U.S. President's Panel of Consultants on Vocational Education, 1963

Report of the panel of consultants on vocational education prepared at the request of the President of the United States. Presents an historical background, a survey of present day programs, and recommendations for future needs.

1259. Farm Labor Fact Book, Washington, D.C., GPO, U.S. Supt. of Documents, 1959, 240 pp.

Discusses the particular problems of the many different groups that make up the farm work force, including farm operators, unpaid family workers, hired farm workers, and imported farm workers.

1260. The American Workers' Fact Book, Washington, D.C., GPO, U.S. Supt. of Documents, 1960, 395 pp.

Presents, in nontechnical language, the overall picture of labor's place in the economic life of the U.S. Discusses such subjects as living standards; worker groups, including craftsmen, migratory workers, older workers, young workers, and nonwhite workers; industrial safety; wages and hours; labor laws; unemployment insurance; and labor unions. Currently being revised.

1261. Occupations, 14th ed., Washington, D.C., GPO, U.S. Supt. of Documents, 1962, 20 pp., (Price List 33A)

1262. Economic Report of the President, Transmitted to the Congress, January 1966, Washington, D.C., GPO, U.S. Supt. of Documents, 1966, 306 pp.

1263. Education, Washington, D.C., GPO, U.S. Supt. of Documents, 1963, (Price List 31)

This is a comprehensive list of federal government publications published annually by the U.S. Government Printing Office.

1264. Labor, Washington, D.C., GPO, U.S. Supt. of Documents, 1963, (Price List 33)
This is a comprehensive list of federal government publications published annually by the U.S. Government Printing Office.

1265. Occupations, Washington, D.C., GPO, U.S. Supt. of Documents, 1963, 18 pp., (Price List 33A)

See annotation for entry No. 1264.

1266. The Implications of Reduced Defense Demand for the Electronics Industry, Cat. No. AC 1.2:El 2, Washington, D.C., GPO, U.S. Supt. of Documents, 1965, 271 pp.

This publication, covering the electronics industry, is one of a series devoted to exploring the domestic economic implications of reductions in defense demand. It presents the completed study which was submitted to the Arms Control and Disarmament Agency in September 1965.

1267. Objectives for Vocational and Technical Education in Agriculture, Cat. No. FS 5.281:81011, Washington, D.C., GPO, U.S. Supt. of Documents, 1965, 12 pp.

Designed primarily for use by teachers of vocational agriculture in developing training programs that will meet the educational needs of persons engaged, or preparing to engage, in farming; and also for those whose vocational interest is in nonfarming occupations which require knowledge and skills in agricultural subjects. The material presented herein is intended as a guide of basic principles to be considered in preparing teaching programs, not as a course of study.

1268. Utah Job Guide, Managerial Occupations, Salt Lake City, Utah Dept. of Employment Security

Presents occupational information on more than 20 managerial positions, including manager of apartment house and building, gas service station, restaurant, motel-hotel, and grocery store. Tells how and where to train, gives earnings and employment outlook, and shows where jobs are located.

1269. Uthe, E., "Responsibilities for Teaching Automated Data Processing," Business Education Forum, February 1965, 19:7-9

1270. Vaccaro, Jr., L.C. (Mich. State Univ.) "A Survey and Evaluation of the Practices Used by Michigan Community Colleges in the Recruitment and Selection of Faculty," Mich. State Univ., 1963, 145 pp.
Order U. Microfilms no. 64-5009, Ann Arbor, Mich.

1271. Van Auken, M., "Progress in Programmed Instruction," Chemical Engineering, April 27, 1964, 71:145-50

1272. Van Loh, F. A. and C. E. Bundy, "Competencies Needed by Fertilizer Retailers," Agricultural Education Magazine, January 1965, 37:180-1

1273. Van Til, W., "In a Climate of Change; Development of Science and Technology," Assn. for Supervision and Curriculum Development Yearbook 1965:10-11

1274. Van Tries, R. P., "In Minnesota: A Status Report on Industrial Education," Industrial Arts & Vocational Education, December 1964, 53:18-9

1275. Vander Werf, L. S., "Needed Research in Vocational Education," Phi Delta Kappan, April 1965, 46:405-10

1276. Venables, E.C., "Placement Problems Among Engineering Apprentices in Part-Time Technical College Courses," Brit. J. Educational Psychology, November 1960, 30:242-3; February 1961, 31:68

1277. Venn, G., Man, Education and Work, Washington, D.C., American Council on Education, 1964

1278. Vezzani, A. W., "Vocational Teacher: Finding, Training and Qualifying Him," School Shop, April 1965, 24:49-50

1279. Venn, G., "Recommendations for Postsecondary Vocational and Technical Education," Education Digest, November 1964, 30:8-11

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1281. Vocational and Technical Education in Virginia; Present and Future Needs, Report to the Governor and General Assembly of Virginia, Va. Comm. on Vocational Education, Commonwealth of Va., Dept. of Purchases and Supply, 1963, 33 pp.

1282. A Guide for the Establishment of Technical Colleges in Virginia, Richmond, Va., State of Virginia, Dept. of Technical Education, 1965

1283. *Policies, Procedures, and Regulations Governing the Establishment and Operation of the Program of Technical Education as Authorized by the 1964 General Assembly*, Richmond, State of Virginia, Dept. of Technical Education, 1965

1284. *Factors in Workers' Decisions to Forego Retraining Under the Manpower Development and Training Act*, Norfolk, Virginia State College, Office of Manpower, Automation and Training

1285. *Where To Find Vocational Training in New York City; A Directory*, 16th ed., Vocational Advisory Service, 1962

1286. Vogely, W. A., "Technological Change and Demand," *Monthly Labor Rev.*, August 1964, 87:891-2

1287. Vorhies, R. M., "Agricultural Education in Junior Colleges," *Agricultural Education Magazine*, July 1965, Vol. 38, No. 1, pp. 16-18

1288. Wagley, L. A. (Univ. of Ariz.) "Educational Requirements for Off-the-Farm Agricultural Occupations in Yuma County, Arizona," Univ. of Ariz., 1965, 141 pp.
Order U. Microfilms no. 65-7855, Ann Arbor, Mich.

This thesis analyzes the educational requirements for off-the-farm agricultural occupations in the area cited. It aims to determine the essential skills and knowledge needed both for initial and long-term employment situations with hopes that the results will reveal a basis for planning training programs to meet the needs of the present or potential employee. The study considers various competency areas within off-the-farm agricultural occupations separately in addition to considering overall tendencies.

1289. Wagner, R. R., N. Nybroten, and R. L. Chrysler, "Employment and Labor Force in Different Industries and Localities in Idaho, 1950-1961," Univ. of Idaho, Bur. of Business and Economic Res., 1962, 51 pp.

1290. Waldo, A. D. (Mich. State Univ.) "The Off-Farm Employment of Farm Operators in the United States," Mich. State Univ., 1963, 378 pp. , Order U. Microfilms no.63-6168, Ann Arbor,Mich.

The purpose of this study was to investigate four aspects of off-farm employment: (1) the number and characteristics of multiple jobholders in the farm-operator labor force, (2) the magnitude and distribution of off-farm wage earnings, (3) the kinds of industries which seem to attract labor from agriculture, and (4) the nature of multiple jobholding overtime.

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1298. Wanous, S. J., "Evaluation of Curriculum Practices and Trends in Business Education," National Business Education Yearbook, 1964, 2:21-38

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1299. Ward, G. B., "Careers in Industry; Banking," Vocational Guidance Quarterly, Winter 1964-65, 13:124-6

1300. Warmbrod, J. R. (Univ. of Ill.) "State Policies for Distributing State and Federal Funds for Vocational Education in Agriculture to Local School Districts," Univ. of Ill., 1962, 301 pp.
Order U. Microfilms no. 62-6253, Ann Arbor, Mich.

1301. Warner, J. C. (Univ. of Mo.) "Employment Opportunities and Training Needs for Skilled Workers in the State of Missouri with Projections Through 1970," Univ. of Mo., 1962, 195 pp.
Order U. Microfilms no. 63-1544, Ann Arbor, Mich.

The purpose of this study was to compare probable supply of, and demand for, skilled industrial workers in Missouri from 1961 to 1970, and to interpret the implications of these findings for the program of vocational education.

1302. Warner, J. C., "Employment Opportunities and Training Needs for Skilled Workers in the State of Missouri, with Projections Through 1970," Univ. of Mo. Bull. 63, No. 26, Ed. Series No. 89, 1962, 24 pp.

1303. Warner, R. A. (Colo. State Coll.) "A Public Understanding of Business Education in Selected Illinois Communities," Colo. State Coll., 1964, 297 pp.
Order U. Microfilms no. 64-8531, Ann Arbor, Mich.

The problem of this study was to discover the opinions of secondary-school business teachers, secondary-school principals, and citizens of Illinois about business education on the secondary-school level.

1304. Washatka, S. and W. Mitchell, "How Wisconsin's Teacher-Internship Program Works," Business Education World, April 1965, 45:11-12

1305. Course Outline for Distributive Education Cooperative Part-Time Programs, revised, Washington State Board for Vocational Education, 1958, 523 pp.

1306. Technical Education; Annotated Bibliography, Washington State Board for Vocational Education, 1961, 52 pp.

1307. Wasser, P. D., "Kankakee's Diversified Occupations Program Works for Everybody," Industrial Arts & Vocational Education, February 1965, 54:32-3; Also in American School Board J., April 1965, 150:45-6

1308. Waterloo, G. E. (Northwestern Univ., Ill.) "An Analysis of Secondary School Guidance Programs in Seventeen Illinois Counties with Special Reference to the Value of the Assistance Provided by the State Department of Guidance Services," Northwestern Univ., 1965, 153 pp.
Order U. Microfilms no. 65-12,186, Ann Arbor, Mich.

The investigation was conducted for the following purposes: (1) to determine the present status of secondary school guidance programs in the cooperating schools; (2) to determine the services actually provided by the Illinois Department of Guidance Services; (3) to secure an appraisal of these state services by secondary school personnel in the cooperating schools; (4) to discover the plans of these secondary schools for the development of their guidance services during the period of 1964 to 1969; and (5) to discover what services of the State Guidance Department will be most needed by the schools to achieve their goals.

1309. Waters, H. J. (New York Univ.) "An Apprenticeship and Training Program for Industrial Distributor Salesmen," New York Univ., 1964, 224 pp.
Order U. Microfilms no. 65-34, Ann Arbor, Mich.

This dissertation investigates how the industrial distributor salesman might be better prepared to serve the industrial consumer, where he might obtain this preparation, and from whom. Included are an analysis of current practices, criticisms thereof, and suggested guidelines for improvement.

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1312. Wecksler, A. N., "USES Answers Industry's SOS; Staffing a New Technology Center," Mill & Factory, June 1963, 72:107-8

1313. Wecksler, A. N., "Worker Training-Industry Does It Better," Mill & Factory, September 1963, 73:84-7

1314. Weinberg, E., Industrial Retraining Program for Technological Change; A Study of the Performance of Older Workers, U.S. Bur. of Labor Statistics Bull. No. 1368, Washington, D.C., GPO, 1963, 34 pp.

1315. Weiser, E. V. and L. J. Sohm, An Investigation of the Training Requirements of Small Business with Regard to the Educational Needs of Prospective Employees, Havre, Montana, Northern Mont. Coll. and Mont. State Planning Board, 1962, 84 pp.

This is a Small Business Management Research Report.

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Two questionnaires were developed to measure vocational needs. The first questionnaire (48 "yes-no" items scoring on 12 scales) was administered to 1014 employed individuals. The scales were relatively independent, but only 5 scales had adequate reliabilities. The second questionnaire (Minnesota Importance Questionnaire MIQ) consisting of 100 5-point-rating-scale items and scoring on 20 scales, was completed by 2308 employed individuals. All scales had high reliabilities. Analysis indicated that disability status, occupational status, and employment status differentially affected response to the MIQ. Occupational and employment status differences were interpreted as evidence of construct validity for some of the MIQ scales. Scoring directions and norms are presented for the MIQ.

1317. Wellens, J., "Training Revolution," Chemistry and Industry, March 28, 1964, pp. 516-17

This article consists of a review by J. S. Gourlay.

1318. Wells, M. B., "Untouched by Human Hands; Automation in Vocational Education for Girls," American Teacher Magazine, October 1964, 49:10

1319. Wendt, D. D., Employment Opportunities and Training Needs for Selected Service Workers in the State of Missouri, with Projections Through 1970, Univ. of Mo. Bull. 63, No. 27, Ed. Series No. 90, 1962, 21 pp.

1320. Wenrich, R. C., A Study To Determine More Effective Ways of Using State and Federal Vocational Education Funds in the Further Development of Programs Operated by Local School Districts, Ann Arbor, Mich., Univ. of Mich., July 1962, 103 pp.

1321. Wenrich, R. C., G. I. Swanson, and R. N. Evans, "Vocational Technical, and Practical Arts Education," Rev. Educational Research, 1962, Vol. 32, No. 3, pp. 267-76

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1323. White, R. E., "Junior Colleges, a Technical Education Role," Minn. J. Education, February 1965, 45:12-14

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1326. Wible, Jr., H. G. (North Tex. State Univ.) "Self-Appraisal Related to the Professional Development of Faculty Members in Schools of Business," North Tex. State Univ., 1964, 303 pp.
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1327. Wick, S. K., "Area Vocational-Technical Education," Minn. J. Education, December 1964, 45:33

1328. Wiener, R., "Changing Manpower Requirements in Banking," Monthly Labor Rev., September 1962, pp. 989-95
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Order U. Microfilms no. 63-4029, Ann Arbor, Mich.

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1333. Williamson, M. A., "Certifying Engineering Technicians," Instrument Soc. of America, October 1962, 9:51-2

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Order U. Microfilms no. 64-5012, Ann Arbor, Mich.

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1348. Wolfbein, S. L., "Retraining for Change," Automation, April 1964, 11:104-6

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1353. Woods, T. E., "Integrating Mathematics and Industrial Arts," J. Industrial Arts Education, January 1964, 23:19

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1357. Worthington, R. M. and R. L. Koble, "Industrial Teacher Education at Trenton State College," Industrial Arts & Vocational Education, March 1965, 54:60-2

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Order U. Microfilms no. 65-1911, Ann Arbor, Mich.

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1366. Zeisel, J. S., Manpower and Training: Trends, Outlook, Programs, Manpower Res. Bull. No. 2, Washington, D.C., U.S. Dept. of Labor, OMAT, 1963, 26 pp.

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1376. "Pay-As-You-Go Apprenticeship; Picatinny Arsenal's Intensive Four-Year Tool and Die Apprenticeship Program," American Machinist, May 10, 1965, 109:74-5

1377. "Programmed Aids for Apprentice Training," American Machinist, May 10, 1965, 109:83

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1381. "Place and Role of Vocational Education in the Total School Program," American Vocational J., February 1965, 40:33-5

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1383. "Excellence in Vocational Education," American Vocational J., September 1965, 40:12

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1385. "Economic Opportunities and Vocational Acts: New Federal Programs," Audiovisual Instruction, June 1965, 10:472

1386. "Allotment of Federal Funds to States and Possessions Authorized for Fiscal Year 1965 Under the Vocational Education Acts," Business Education Forum, November 1964, 19:22

1387. "FBLA Provides for Effective Public Relations," Business Education Forum, November 1965, 20:31

1388. "Learning New Jobs Before Old Ones Fade," Business Week, April 11, 1964, p. 114

The UAW retrains workers who face technological layoff.

1389. "Putting Teens To Work," Business Week, June 6, 1964, p. 82

This article describes how Job Corps will provide jobs, training, and educational upgrading for unemployed youths.

1390. "Meeting of the Minds That Train Industry," Business Week, June 20, 1964, p. 56

This article presents the highlights of the Annual Conference of American Society for Training and Development held in San Francisco.

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This article includes such topics as Labor Department to survey employers on openings, first step toward new economic indicator, job vacancy index.

1392. "Wanted: Nine-Million New Jobs; Economists Figure that Only Continued Record Growth Will Fill 1970 Needs," Business Week, March 13, 1965, p. 34

1393. "Changing Liabilities to Assets," Business Week, March 20, 1965, p. 156

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1397. "California Plan for Public Law 88-210; Vocational Education Act of 1963," California Education, November 1964, 2:23

1398. "Identifying Potential Dropouts," California Education, September 1965, 3:31

1399. "Employment," Canadian Chemical Processing, November 1963, 47:31-2

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1401. "Patent Office To Train Technicians," Chemical & Engineering News, December 24, 1962, 40:30-1

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This article is a guide to job-hunting tools.

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1411. "More Technicians Needed," Chemical Engineering Progress, August 1964, 60:14-15

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1414. "Working for Training," The Economist, February 9, 1963

1415. "Industrial Training; Urgent for Teenagers," The Economist, June 13, 1964, 211:1223

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1419. "BACIE/IWS Annual Conference on Trends in Apprenticeships," Engineering, December 21, 1962, 194:824-5

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1422. "Technical Awareness and Economic Growth," Engineering, April 3, 1964, 197:466

1423. "Programmed Learning for Apprentices," Engineering, November 13, 1964, 198:613

1424. "Programmed Industrial Training in Action," Engineering, December 11, 1964, 198:748

1425. "What Is the Meaning of the Industrial Training Act?" Engineering, February 19, 1965, 199:233

1426. "Labor Shortage; Fact or Fiction?" Engineering News, August 26, 1965, 175:17-19

1427. "Displaced Labor: 1962," Factory, October 1962, pp. 78-81

Survey of 500 plants representing a cross section of industry in the first 6 months of 1962. Several findings, e.g., changes in work methods eliminated more jobs than did new equipment, and, in some plants, skilled workers were affected more than the unskilled.

1428. "Trade School Teaches Plastic Patternmaking," Foundry, March 1963, 91:168

1429. "Manpower for Medical Research," Health, Education, and Welfare Indicators, July 1962; reprint available: Office of Program Anal., 10 pp.

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1430. "Library Services," Health, Education, and Welfare Indicators, December 1962; reprint available: Office of Program Anal., 10 pp.

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1432. "Applying Science to Industrial Arts Activities," Industrial Arts & Vocational Education, June 1963, 52:16

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A continuing program for the selection and training of surgical (operating room) technicians and vocational guidance and counseling for out-of-school youth and adults in the health occupations field including the study of necessary job competencies, testing and counseling for training in the emerging health occupations.

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1544. Borata, N. H., "Learning Laboratory To Teach Basic Skills in a Culturally Deprived Area," Miami, Dade County Public Schools, OE 5-85-073, OE proj. no. 5-0050 (in process, to be completed June 30, 1968)

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1560. "The Changing Skill and Occupational Composition of Employment Opportunities," Cambridge, Mass., Harvard Univ., U.S. Dept. of Labor, OMAT (in process March 1965)

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1565. Burgener, V. E., "Coordination and Promotion of Research and Development Activities in Vocational Education in Illinois," Springfield, Ill., Ill. State Board of Vocational Education and Rehabilitation, OE 5-85-126, OE proj. no. 5-0106 (in process, to be completed November 30, 1966)

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This bibliography gives statewide employment figures by SIC code and figures for employment and unemployment by selected areas.

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1568. Lewis, J. W., "Occupational Training Program for Low Achievers," Argo, Ill., Ill. Dept. of Public Instruction and Argo Community High School (in process March 1966)

An occupational training program for low academic achievers and dropouts based on the cooperative education technique with job placements in low skilled and service occupations. Related instruction will be provided and in-service staff consultations will be held among all teachers who are working with these particular learners.

1569. Harshbarger, E. M., "School Survey of Champaign, Ford, Douglas, and Piatt Counties for a Comprehensive Junior College," Champaign, Ill., Ill. Dept. of Public Instruction and Champaign County School System (in process March 1966)

A survey to evaluate current programs and projected need in vocational areas in the counties involved.

1570. Mellon, E. H. and R. L. Cooley, "A Team Teaching Approach to Present Occupational Information," Champaign, Ill., Ill. State Dept. of Public Instruction and Champaign High School (in process March 1966)

An overall program combining the various subject areas using a team teaching approach to present commonalities of occupational information pertinent to securing and holding employment. In-school preparatory and cooperative education techniques will be utilized.

1571. Phelps, E., "Follow-Up of Collinsville High School Graduates," Ill. Dept. of Public Instruction and Collinsville High School (in process March 1966)

A study to see if the vocational program meets the occupational needs of Collinsville graduates.

1572. Stitzel, D. E., "A Feasibility Study of Junior College Needs in DeKalb County and Neighboring Areas," Ill. Dept. of Public Instruction and DeKalb County School System (in process March 1966)

A study to determine the feasibility of establishing a junior college for DeKalb County and surrounding areas and vocational education and occupational needs in this area.

1573. Green, N., "Evaluation of East Aurora Experimental Project for Academically Handicapped," East Aurora, Ill., Ill. Dept. of Public Instruction and East Aurora School System (in process March 1966)

An evaluation of the experimental program utilizing remedial teaching in a special learning center, employment, and special guidance services.

1574. Michael, L.S. and G. B. McGrew, "Participating Occupational Experience for Slow Learners," Evanston, Ill., Ill. Dept. of Public Instruction and Evanston High School (in process March 1966)

A cooperative program identified as "participating occupational experience" for slow learners and low ability students including an extended related class under the direction of a two-teacher team. Television video tapes will be prepared locally to augment instruction.

1575. Hall, R., "Kankakee Area Junior College Feasibility Study," Kankakee, Ill., Ill. Dept. of Public Instruction and Kankakee County School System (in process March 1966)

A study to determine the vocational and technical education desires of parents and students, student capabilities in educational programs, and local industry needs for individuals having varying degrees of education, skills, and experience.

1576. Woodward, W., "Vocational and Technical Education Curricula Needs for the Proposed Macon County Junior College," Ill. Dept. of Public Instruction and Macon County School System (in process March 1966)

A survey to determine vocational and technical education needs for the proposed Macon County and surrounding area junior college.

1577. Nichols, E. C., "Encouraging Low Ability Students To Complete High School," Ill. Dept. of Public Instruction and Marengo High School (in process March 1966)

A program designed to encourage low ability students to complete high school utilizing a basic learnings core and a sheltered work shop for preparatory training leading to employment in semiskilled or single skill areas.

1578. Windhorst, L., "Cooperative Educational Program," Ill. Dept. of Public Instruction and Olive Branch High School (in process March 1966)

Continuing a cooperative vocational educational program for slow learners and school dropouts in a rural, socioeconomic depressed area of racially mixed population.

1579. Hunter, W., "Employment Opportunities and Training Needs of a Four-County Area," Harrisburg, Ill., Ill. Dept. of Public Instruction and Southeastern Ill. Jr. Coll. (in process March 1966)

A survey to obtain knowledge of employment opportunities and training needs of a four-county area around Harrisburg, Ill.

1580. Watts, J. and H. Avery, "Using TV Audio-Video Tapes in Vocational Education," Ill. Dept. of Public Instruction and Sterling Township High School (in process March 1966)

Proposes to develop and use locally prepared TV audio-video tapes to impart vocational guidance and occupational information to students, and to promote enrollments in vocational classes through a closed circuit system. Program may be expanded to provide this service to the surrounding area beyond the home school district.

1581. Horvatich, W., "Thornton Fractional District No. 215 Work Experience Research Project," Ill. Dept. of Public Instruction and Thornton Fractional High School Dist. No. 215, Calumet City, Ill. (in process March 1966)

A study of occupational opportunities and student, parent, faculty, and employer needs as a guide for school program modifications for improved vocational preparation.

1582. Slichenmyer, H. L. and W. D.Whiteside, "Occupational Orientation in Regular Subjects for Potential Dropouts," Ill. Dept. of Public Instruction and Township High School District No. 214, Mount Prospect, Ill. (in process March 1966)

A project for underachievers and potential dropouts to involve special occupational orientation in regular subjects, a related class in occupational-technical curricula and remedial communication skill development, special counseling with students and parents, and vocational instruction in technical processes and manufacturing.

1583. Braun, R. H., "Program for Slow Learners in Junior High School," Ill. Dept. of Public Instruction and Urbana Junior High School, Urbana, Ill. (in process March 1966)

Special orientation in common learnings for slow learners in J.H.S. (grades 7-8-9) along with sheltered workshop using mass production techniques for developing vocational awareness, job skills, and attitudinal competencies.

1584. Martinson, J., "Vocational Training for Library Technicians: A Survey of Experience to Date," Inst. for Advancement of Medical Communications, OE 5-85-030, OE proj. no. 5-0033 (completed October 31, 1965)

1585. "Trends in European Apprenticeship Related to Accelerated Technical Development," Geneva, International Labour Office, OMAT (in process March 1965)

1586. Howe, T. G., "Establishment of an Occupational Research and Development Coordinating Unit for the State of Iowa," Des Moines, Ia., Iowa State Dept. of Public Instruction, OE 5-85-121, OE proj. no. 5-0111 (in process, to be completed November 30, 1966)

1587. Lagomarcino, V. S., "Interdisciplinary Research and Development in Vocational and Technical Education: Non-Metropolitan Areas," Iowa State Univ., OE 5-85-108, OE proj. no. 5-0045 (in process, to be completed November 30, 1966)

1588. McKinley, M. and H. Chadderdon, "Curriculum Development and Training Program for Food Service Employees," Iowa State Univ., OE 6-85-024, OE proj. no. 5-0129 (in process, to be completed August 31, 1968)

1589. "Institutes for Educators on Manpower Requirements," New York, Joint Council on Economic Education, U.S. Dept. of Labor, OMAT (in process March 1965)

1590. Russell, R. B., "To Develop a Program in Salesmanship for Testing the Use of Program Textbooks in Adult Education," Emporia, Kan., Kansas State Teachers Coll., OE 5-10-205, OE proj. no. 5-8627 (completed January 31, 1966)

1591. Agan, R., "An Integrated Vocational Education Services Pilot Program in a Secondary School," Kansas State Univ., OE 5-85-078, OE proj. no. 5-0027 (in process, to be completed September 30, 1967)

1592. "Curriculum Development Workshop," Louisiana State Dept. of Education and Louisiana State Univ. (completed 1965)

A workshop for developing courses of study at the high school level leading to job entry in the "non-farm agricultural occupational families," which include the following:

1. Farm machinery sales and service
2. Farm supplies and equipment
3. Livestock and poultry
4. Crops, forestry and soil conservation
5. Ornamental horticulture
6. Wild life and recreation
7. Farm service
8. Agriculture service

1593. "Development Teacher Proficiency in Teaching Non-Farm Agricultural Occupations," Louisiana State Dept. of Education and Louisiana State Univ. (proposed 1966)

This is a proposed summer in-service workshop for vocational agriculture teachers. The purpose of the workshop is to acquaint teachers with the materials developed in the recently concluded Curriculum Development Workshop.

1594. "Study To Determine Opportunities and Training Needs for Non-Farm Agriculture Jobs in the Metropolitan Areas of Louisiana," Louisiana State Dept. of Education and Louisiana State Univ., Dept. of Vocational Agriculture Education, Order La. State Un., School of Ed., Baton Rouge, La. (Phase One completed 1965, Phase Two in process March 1966)

Phase One of this study covers Shreveport, Monroe, Alexandria, Lake Charles, Lafayette, Baton Rouge, and New Orleans. Phase Two includes the smaller rural cities ranging from 3,000 to 15,000 in population.

1595. Mondart, C. L., "Development of Training Programs for Youth Preparing To Enter Non-Farm Jobs," Baton Rouge, La., Louisiana State Univ., OE 5-85-040, OE proj. no. 5-0016 (in process, to be completed May 31, 1967)

1596. Teeter, G., "Evaluation of the Effectiveness of Using Specialized Instructors in Providing Occupational Training for High School Vocational Agriculture Students," Malvern, Ark., Magnet Cove High School, OE 5-85-016, OE proj. no. 5-0013 (completed December 31, 1965)

1597. Frank, N. H., "Conference To Develop the General Pattern of Activities for a Vocational Education Summer Study Program," Cambridge, Mass., MIT, OE 5-85-104, OE proj. no. 5-0036 (completed August 15, 1965)

1598. Frank, N. H., "A Summer Study of Occupational, Vocational and Technical Education," Cambridge, Mass., MIT, OE 5-85-135, OE proj. no. 5-0089 (completed January 31, 1966)

1599. Koschler, T. A., "An Eight-Week Summer Institute Training Program To Retrain Office Education Teachers for Teaching Business Electronic Data Processing," Miami, Miami-Dade Junior College, OE 5-85-098, OE proj. no. 5-0029 (completed August 31, 1965)

1600. "An Experimental Program Designed To Promote a Greater Interest in Fulfilling Latent Potential in Under-Achieving High School Boys Through Goal Identification," Mich. State Dept. of Education (in process March 1966)

1601. Bartlett, L. M., "A Proposal for the Establishment of a State Vocational Education Research Coordinating Unit for Michigan," Lansing, Mich., Mich. State Dept. of Education, OE 5-85-105, OE proj. no. 5-0134 (in process, to be completed November 30, 1966)

1602. Peterson, N., "A Pilot Project in Vocational Guidance, Placement and Work Experience for Youth for Whom Existing Work Experience Are Not Appropriate," Mich. State Dept. of Education and Livonia Public Schools, Livonia, Mich. (in process March 1966)

1603. "Job Projections to 1980 by Major Industry and Occupation," Mich. State Dept. of Education, Vocational Education Div., Mich. Employment Security Comm. and Mich. Office of Economic Expansion (Battelle Memorial Inst.) (in process; preliminary information available June 1966)

1604. "Measuring the Benefits and Costs of Retraining Programs for Unemployed Workers," Mich. State Univ., East Lansing, U.S. Dept. of Labor, OMAT (in process March 1965)

1605. Albracht, J., "Determining Vocational Competencies for Performance of Essential Activities for Sales Personnel in the Feed Industry and the Sites at Which the Competencies Could Be Taught," East Lansing, Mich., Mich. State Univ., OE 6-85-014, OE proj. no. 5-0156 (in process, to be completed June 30, 1966)

1606. Allen, R., "Conference on Labor and Vocational Education," East Lansing, Mich., Mich. State Univ., OE 6-85-021, OE proj. no. 5-0130 (completed October 31, 1965)

1607. Byram, H. M., "Evaluating Vocational Education in the Public Schools," East Lansing, Mich., Mich. State Univ., Coll. of Education, Ed. Res. Service no. 12, October 1965

This was a project to develop and demonstrate procedures for evaluation of a comprehensive program of vocational education in the public schools of Michigan. Three schools of the state are included in the project. The project is currently being extended to 20 additional schools.

1608. Haines, P. G., "How High School Cooperative Trainees Fare in the Labor Market: Phase B," East Lansing, Mich., Mich. State Univ., Coll. of Education, Ed. Res. Series no. 23, May 1965

This is a follow-up of 1962 and 1963 graduates who received training for distributive office or trade and industrial occupations.

1609. Haines, P. G., "Effects of Cooperative Vocational Education upon Behavior in the Labor Market," (a continuation of present research) East Lansing, Mich., Mich. State Univ. (proposed February 2, 1965)

1610. Haines, P. G., "A Developmental Vocational Education Research and Teacher Education Program Based on a Clinical Concept," East Lansing, Mich., Mich. State Univ., OE 5-85-111, OE proj. no. 5-0048 (in process, to be completed November 30, 1966)

1611. Hollandsworth, H., "A Proposal To Prepare Teachers and To Develop Instructional Materials for Food Service Occupations," East Lansing, Mich., Mich. State Univ., OE 6-85-022, OE proj. no. 5-0153 (completed December 31, 1965)

1612. Howell, K. M., "Teaching Vocational and Citizenship Education in Social Studies," East Lansing, Mich., Mich. State Univ., OE 5-10-348, OE proj. no. 5-8271 (in process, to be completed August 30, 1966)

1613. O'Donnell, B., "Procedures for Establishment and Evaluation of Training Programs for Wage Earning Occupations Related to Home Economics," East Lansing, Mich., Mich. State Univ. (proposed February 2, 1965)

1614. Vossbrink, M., "Attitudes and Beliefs About Homemaking and/or Home Economics Education in Local Schools," East Lansing, Mich., Mich. State Univ. (completed February 1, 1966)

1615. Tamminen, A. W., "The Relationship Between Guidance Variables Personal Social Variables," St. Paul, Minn., Minn. Dept. of Education, OE 5-85-035, OE proj. no. 5-0195 (in process, to be completed August 31, 1967)

1616. Shepherd, A. G., "Establishment of State Vocational Research Coordinating Unit," Jackson, Miss., Miss. State Dept. of Education, OE 5-85-115, OE proj. no. 5-0099 (in process, to be completed November 30, 1966)

1617. North, W. E., "A Study of the Effectiveness of the GATB and Kuder Preference Record for Predicting Success in Selected Vocational Courses and Related Jobs," Warrensburg, Mo., Central Mo. State Coll. and Mo. State Dept. of Education (in process, to be completed August 1, 1968)

The objectives of this study are (1) to determine the validity of the General Aptitude Test Battery for prediction of success in five occupational courses and subsequent job success; (2) to determine the ability of the GATB to discriminate between successful students in different vocational courses; (3) to compare the validities of the regression equations developed in this study with the validities obtained by USES specific occupational norms; (4) to determine whether specifically developed interest keys significantly add to the prediction equations.

1618. Diebel, T., "Proposal for Establishment of Prototype Occupational and Research Development Coordinating Unit," Helena, Mont., Mont. State Dept. of Public Instruction, OE 5-85-123, OE proj. no. 5-0109 (in process, to be completed November 30, 1966)

1619. Dillon, R. D., "Employment Opportunities and Usable Agricultural Skills in Nonfarm Agricultural Occupations in Appalachia," Morehead, Ky., Morehead State Coll., OE 5-85-028, OE proj. no. 5-0020 (in process, to be completed September 30, 1966)

1620. "Research Study of Labor Force Trends and Projections in the United States," New York, National Bur. of Economic Research, Inc., U.S. Dept. of Labor, OMAT (in process March 1965)

1621. "National Conference on Problems of Rural Youth in a Changing Environment," Washington, D.C., National Committee for Children and Youth (NCCY), U.S. Dept. of Labor, OMAT, (in process March 1965)

1622. "Pilot Program in Manpower Development To Assist School Districts To Modernize in the Face of Technological Change," Washington, D.C., National Education Assn., U.S. Dept. of Labor, OMAT (in process March 1965)

1623. Walsh, G. A., "Study of a New Approach to Vocational Guidance Through the Use of Exhibits and Displays," Philadelphia, Pa., National Ed. Industrial Foundations, OE 6-85-036 (completed January 31, 1966)

1624. Tate, B., "Identifying Characteristics of Practical Nursing Students for Use in Guidance and Selection," New York, National League for Nursing, OE 5-85-036, OE proj. no. 5-0039 (in process, to be completed April 30, 1967)

1625. "An Inventory and Analysis of Employee Activities and Competency Areas as Related to Occupational Education Requirements," Neb. State Dept. of Education, Vocational Div. (in process March 1966)

1626. "Some Approaches to Vocational Technical Education in Agriculture," Neb. Dept. of Education, Vocational Div. (in process March 1966)

1627. Coster, J. K., "An Experimental Evaluation of Approaches To Prepare High School Students for Agricultural Occupations Other than Farming," Neb. State Dept. of Education and Univ. of Neb., OE 5-85-020, OE proj. no. 5-0069 (in process, to be completed June 30, 1966)

1628. "A Study To Determine the Educational Services That Can Be Provided by an Educational Service Unit," Neb. State Dept. of Education, Vocational Div. (in process March 1966)

1629. "A Study To Determine Curriculum and Subject Matter To Be Used for School Administrators in Administering Vocational Education Programs," Neb. State Dept. of Education, Vocational Div. (in process March 1966)

1630. Horner, J. T. and J. K. Coster, "The Establishment and Development of a Research and Coordinating Unit in the Area of Occupational Needs and Research and Coordination in Nebraska," Neb. State Dept. of Education, Vocational Div. and Univ. of Neb., OE 5-85-127, OE proj. no. 5-0105 (in process, to be completed November 30, 1966)

1631. Lockette, R. E., "Application of the Judgmental Procedure to the Development of Programs of Vocational and Practical Arts Education," Trenton, N. J., New Jersey State Dept. of Education, OE 6-85-045, OE proj. no. 5-0190 (in process, to be completed June 30, 1966)

1632. Worthington, R. M., "The Establishment and Initial Operation of a Research and Development Unit in the Vocational Division, Department of Education, State of New Jersey," Trenton, New Jersey State Dept. of Education, OE 5-85-122, OE proj. no. 5-0110 (in process, to be completed November 30, 1966)

1633. Hunt, M. G., "Establishment of a State Research Coordinating Unit for the State of New Mexico," Santa Fe, N. Mex. State Dept. of Education, OE 5-85-119, OE proj. no. 5-0103 (in process, to be completed November 30, 1966)

1634. Lennard, H., "Teacher and Student Roles in Adult Education," New York, New School for Social Research, OE 2-10-133, OE proj. no. 5-0072 (completed June 30, 1965)

1635. Steele, T. K., "Experimental Program for Training and Retraining of Older Workers, Unemployed Youths, and Disadvantaged Sections of the Population," New York, N. Y. Inst. of Technol., OE 5-85-070, OE proj. no. 5-0006 (in process, to be completed October 31, 1966)

1636. Gotkin, L. G., "The Development of a Beginning Reading Skills Program," New York, N. Y. Medical Coll., OE 5-85-013, OE proj. no. 5-0749 (in process, to be completed October 31, 1966)

1637. Robertson, A. G., "The Expansion of the Vocational Education Research Unit in the State Education Department, State of New York, into a Bureau of Research and Evaluation in Occupational Education," Albany, N. Y. State Dept. of Education, OE 5-85-117, OE proj. no. 5-0101 (in process, to be completed November 30, 1966)

1638. Gaffga, R. H., "An Investigation of Changes in Gregg Shorthand," New York, N. Y. Univ., School of Education, OE 5-10-413, OE proj. no. 5-8270 (in process, to be completed May 31, 1966)

1639. Valentine, I. E., "An Eight-Week Summer Institute Training Program To Retrain Office Education Teachers for Teaching Business Electronic Data Processing," Raleigh, N.C. State Board of Education, OE 5-85-084, OE proj. no. 5-0030 (completed August 31, 1965)

1640. "Costs and Returns for Investment in Industrial Education: A Pilot Study," Raleigh, N.C. State of the Univ. of N. Car. at Raleigh, U.S. Dept. of Labor, OMAT (in process March 1965)

1641. Mayo, S., "Center for Research, Development and Training in Occupational Education," N. Car. State Univ., OE 5-85-107, OE proj. no. 5-1005 (in process, to be completed May 31, 1966)

1642. Carroll, A., "Professional Personnel for Occupational Education," N. Car. State Univ. at Raleigh, School of Agriculture (in process March 1966)

1643. Matthews, J. C., "Occupational Adjustments in the South," N. Car. State Univ. at Raleigh, School of Agriculture (in process March 1966)

1644. Baldwin, T. S., "Development of Achievement Measures for Trade and Technical Education," N. Car. State Univ. at Raleigh, School of Education (in process March 1966)

1645. Hamlin, H. M., "Criteria and Procedures for the Evaluation of Occupational Education," N. Car. State Univ. at Raleigh, School of Education (in process March 1966)

1646. Hamlin, H. M., "Policy, Policy-Making, Organization, and Finance for Occupational Education," N. Car. Univ. at Raleigh, School of Education (in process March 1966)

1647. Adams, R., "The Evaluation of a Method or Methods for Developing Local Leadership for Functional Regional Vocational Education Programs Among Cooperating School Districts," (a continuation of present research) Northern Mich. Univ. (proposed February 2, 1965)

1648. Hieronymus, G. H., "Documenting and Evaluating the Steps in Establishing a Two-Year Technical College by Critical Path Planning Methods," Fairfax, Va., Northern Virginia Tech. Coll., OE 6-85-028, OE proj. no. 5-0170 (completed March 31, 1966)

1649. Becker, H. A., "A Pilot Project To Develop a Program of Occupational Training for School Alienated Youth," Norwalk, Conn., Norwalk Board of Education, OE 5-85-055, OE proj. no. 5-0005 (in process, to be completed August 31, 1967)

1650. Groelle, M. G., "A Pilot Project in Curriculum Development for Work, Experience and 'Occupations'," Oakland, Calif., Oakland Unified School District, OE 6-85-012, OE proj. no. 5-0163 (in process, to be completed July 31, 1966)

1651. Shoemaker, B., "An Occupational Research and Development Coordinating Unit," Columbus, O., Ohio State Dept. of Education, OE 5-85-131, OE proj. no. 5-0137 (in process, to be completed November 30, 1966)

1652. Taylor, R. E., "How To Improve Teaching for Non-Farm Agriculture Occupations," Ohio State Univ., OE 5-85-009, OE proj. no. 5-0031 (completed August 31, 1965)

1653. Taylor, R. E., "A Center for Research and Leadership Development in Vocational and Technical Education," Ohio State Univ., OE 5-85-008, OE proj. no. 5-0212 (in process, to be completed August 31, 1966)

1654. Towers, E. R., "An Industrial Arts Curriculum Project for the Junior High School," Ohio State Univ., OE 5-85-066, OR proj. no. 5-0059 (in process, to be completed November 30, 1966)

1655. Stover, W. F., "Using the Printing Trade as a Pilot Area for the Development of a National Vocational-Technical School Achievement Testing Program," Columbus, O., Ohio Trade and Industrial Education Service, OE 5-85-011, OE proj. no. 5-0037 (in process, to be completed November 30, 1966)

1656. Cozine, J., "Training Program for Teachers and Leaders of Gainful Employment Training Programs in Home Economics," Okla. State Univ., OE 5-85-100, OE proj. no. 5-0053 (completed July 31,1965)

1657. Cozine, J., "Approaches in Assessing Needs for, Content of, and Factors To Consider in Offering Home Economics Courses for Gainful Employment," Okla. State Univ., OE 5-85-088, OE proj. no. 5-0026 (completed November 30, 1965)

1658. Hull, W. L., "Training Institute To Upgrade Teachers of Vocational Agriculture in Distributive Education and Supervised Training in Off-Farm Agricultural Occupations," Okla. State Univ., OE 5-85-077, OE proj. no. 5-0025 (in process, to be completed August 31, 1967)

1659. Roney, M. W., "Development of Curriculum Guide in Electromechanical Technology," Okla. State Univ., OE 6-85-057, OE proj. no. 5-0158 (in process, to be completed September 30, 1966)

1660. Stevenson, W., "Research Coordinating Unit for Vocational Education in Oklahoma," Okla. State Univ., OE 5-85-129, OE proj. no. 5-0139 (completed November 30, 1965)

1661. Sutker, S., "An Exploratory Analysis of the Roles and Role Conflicts of Vocational Teachers in Oklahoma," Okla. State Univ., OE 5-85-001, OE proj. no. 5-0095 (in process, to be completed June 30, 1966)

1662. Watson, N. E., "An Eight-Week Summer Institute Training Program To Retrain Office Education Teachers for Teaching Business Electronic Data Processing," Costa Mesa, Calif., Orange Coast Junior College Dist., OE 5-85-096, OE proj. no. 5-0041 (completed August 31, 1965)

1663. Ryan, T. A., "Improvement of Vocational Decision-Making in the Community College," Corvallis, Ore., Oregon State Coll., OE 6-85-065, OE proj. no. 5-0154 (in process, to be completed November 30, 1966)

1664. Loomis, W. G., "A System for Planning, Implementing and Evaluating Vocational Education," Salem, Ore., Oregon State Dept. of Education, Div. of Community Colleges and Vocational Education, OE 5-85-049, OE proj. no. 5-0017 (in process, to be completed September 30, 1966)

1665. Becker, E. D., "Revised Instructional Program for 'Slow Learners' To Improve Their Job Placement Opportunities," Medford, Ore., Oregon State Dept. of Education and School Dist. 549C, OE 5-85-010, OE proj. no. 5-0063 (completed March 31,1966)

1666. "Countywide Studies of Vocational Education Needs," Oregon State Dept. of Vocational Education

Vocational education need studies have been or will be made for the following counties in Oregon:

Jackson County Intermediate Ed. Dist., completed Oct. 1965
Lane County Intermediate Ed. Dist., completed Nov. 1965
Columbia County, completed Aug. 1965
Treasure Valley Community Coll., completed Nov. 1965
Clackamas County Intermediate Ed. Dist., completed Nov. 1965
Lincoln County Intermediate Ed.Dist., completed Sept. 1965
Southwestern Oregon Community Coll., in process, to be
completed July 1966

Umatilla-Morrow County Intermediate Ed.Dist., under development
Yamhill County Intermediate Ed. Dist., under development

1667. "Integrated Instruction Counseling Project," Ore. State Dept. of Vocational Education and Blue Mountain Community Coll., Ore (proposed, to be completed November 1966)

1668. "Three-County Study of Vocational Education Needs," Ore. State Dept. of Vocational Education and Central Oregon Community Coll., Ore. (under development March 1966)

1669. "Livestock Technology Feasibility Study," Ore. State Dept. of Vocational Education and Clatsop Community Coll., Ore. (completed October 1965)

1670. "Marine Technology Feasibility Study," Ore. State Dept. of Vocational Education and Clatsop Community Coll., Ore. (completed October 1965)

1671. "Two-County Study of Vocational Education Needs," Ore. State Dept. of Vocational Education and Clatsop and Tillamook Counties, Ore. (under development March 1966)

1672. "County Vocational Education Study of Needs," Ore. State Dept. of Vocational Education and Hood River County School Dist., Ore. (completed September 1965)

1673. "Vocational Education Planning Grant," Ore. State Dept. of Vocational Education and Jackson County Intermediate Education Dist. (in process, to be completed June 1966)

1674. "Instructional Program for Slow Learners," Ore. State Dept. of Vocational Education and Medford School Dist. 549C, Ore. (in process, to be completed July 1967)

1675. "A Cooperative Guidance Program," Ore. State Dept. of Vocational Education and Ontario School Dist. 8C, Ore. (under development March 1966)

1676. "An Assessment of the Institutional Training Under the Manpower Development and Training Programs in the State," Ore. State Dept. of Vocational Education and Oregon State Univ., Vocational Education Research Coordinating Unit (under development March 1966)

1677. "An Assessment of the Practices of Related Training for Apprentices in Oregon Schools and Community Colleges," Ore. State Dept. of Vocational Education and Ore. State Univ., Vocational Education Research Coordinating Unit (under development March 1966)

1678. "An Evaluation of the Vocational Teacher Education Program in Oregon in Cooperation with Oregon State University," Ore. State Dept. of Vocational Education and Ore. State Univ., Vocational Education Research Coordinating Unit (completed January 1966)

1679. "Model for Agriculture Related Occupations Pilot Programs in Oregon Secondary Schools," Ore. State Dept. of Vocational Education and Ore. State Univ., Vocational Education Research Coordinating Unit (under development March 1966)

1680. "Model for Health Occupations Pilot Programs--Paramedical Occupations Program and Home Nursing Aide Program in Community Colleges," Ore. State Dept. of Vocational Education and Ore. State Univ., Vocational Education Research Coordinating Unit (under development March 1966)

1681. "Model for Pilot Programs in Home Economics for Oregon Secondary Schools," Ore. State Dept. of Vocational Education and Ore. State Univ., Vocational Education Research Coordinating Unit (under development March 1966)

1682. "Model for the Study of the Need for Vocational Education in Selected Geographic and Economic Areas in the State," Ore. State Dept. of Vocational Education and Ore. State Univ., Vocational Education Research Coordinating Unit (under development March 1966)

1683. "A Model for Vocational Education Guidance in Oregon Public Secondary Schools and Community Colleges," Ore. State Dept. of Vocational Education and Ore. State Univ., Vocational Education Research Coordinating Unit (under development March 1966)

1684. "Procedures for Providing a Systematic Approach To Improving Communications Between Labor, Management and Educators To Facilitate Sound Decision-Making in Vocational Education," Ore. State Dept. of Vocational Education and Ore. State Univ., Vocational Education Research Coordinating Unit (under development, to be completed September 1967)

1685. "Statewide Study of Systematic Vocational Education Planning Implementation Evaluation," Ore. State Dept. of Vocational Education and Ore. State Univ., Vocational Education Research Coordinating Unit (in process, to be completed December 1966)

1686. "Vocational Education Research Coordinating Unit in Cooperation with Oregon State University," Ore. State Dept. of Vocational Education and Ore. State Univ., Vocational Education Research Coordinating Unit (in process, to be completed December 1966)

1687. "Two-County Study of Vocational Education Needs," Ore. State Dept. of Vocational Education and Polk-Marion Counties Intermediate Education Districts (completed September 1965)

1688. "Curriculum Development Study," Ore. State Dept. of Vocational Education and Portland Community Coll., Portland, Ore. (completed July 1965)

1689. "Instructional Materials Center Study," Ore. State Dept. of Vocational Education and Portland Community College, Portland, Ore. (completed July 1965)

1690. "An Instructional Materials Production Center To Serve the Needs of Vocational Education in the Portland Metropolitan Area," Ore. State Dept. of Vocational Education and Portland Community College, Portland, Ore. (proposed, to be completed June 1969)

1691. "Planning Grant," (flexible scheduling) Ore. State Dept. of Vocational Education and Portland Public Schools, Portland, Ore. (in process, to be completed June 1966)

1692. "Education of Socio-Economically Disadvantaged," Ore. State Dept. of Vocational Education and Springfield Public Schools, Springfield, Ore. (proposed, to be completed July 1966)

1693. "Occupational Group Guidance," Ore. State Dept. of Vocational Education and Tillamook H.S. (under development March 1966)

1694. "An Area Vocational Education Program Development," Ore. State Dept. of Vocational Education and Treasure Valley Community Coll., Ore. (proposed, to be completed June 1968)

1695. Loomis, W. G. and T. A. Ryan, "A Model Vocational Education Research and Development Coordinating Unit for the State of Oregon," Ore. State Univ., OE 5-85-128, OE proj. no. 5-0104 (in process, to be completed November 30, 1966)

1696. Hayes, R. B., "Effects of Student Reactions to Teaching Methods," Harrisburg, Pa., Pa. State Dept. of Public Instruction, OE 6-10-018, OE proj. no. 5-0096 (in process, to be completed December 31, 1966)

1697. Bjorkquist, D. C., "Effects of Field and Job-Oriented Technical Retraining on Manpower Utilization of the Unemployed," Pa. State Univ., OE 4-10-108, OE proj. no. 5-0085 (in process, to be completed June 30, 1968)

1698. East, M., "An Experience with the Life and Work of the Disadvantaged for the Pre-Service Education of Home Economics Teachers," Pa. State Univ., OE 6-85-060, OE proj. no. 5-0167 (in process, to be completed December 30, 1967)

1699. French, J. L., "Employment Status and Characteristics of High School Dropouts of High Ability," University Park, Pa., Pa. State Univ., OE 5-85-029, OE proj. no. 5-0051 (in process, to be completed June 30, 1966)

1700. Henderson, G. M., "Conference on Home Economics Program Development for Disadvantaged Youth and Their Families," Pa. State Univ., OE 5-85-102, OE proj. no. 5-0091 (in process, to be completed May 31, 1966)

1701. Kaufman, J., "Research, Development and Demonstration in Adult Training and Retraining," University Park, Pa., Pa. State Univ., OE 5-10-263, OE proj. no. 5-0007 (in process, to be completed June 30, 1966)

1702. Kaufman, J., "An Experimental Program To Compare Education Versus Training for Young School Dropouts," Pa. State Univ., OE 5-85-012, OE proj. no. 5-0060 (in process, to be completed February 28, 1970)

1703. Kaufman, J. and C. Schaefer, "The Preparation of Youth for Effective Occupational Utilization," University Park, Pa., Pa. State Univ., OE 5-10-119, OE proj. no. 5-0087 (in process, to be completed August 31, 1966)

1704. Love, G. M., "Development and Evaluation of Instructional Units in Ornamental Nursery, Floriculture, and Turf Occupations for the Northwestern United States," Pa. State Univ., OE 5-85-014, proj. no. 5-0022 (in process, to be completed September 30, 1966)

1705. Mitzel, H. E. and G. L. Brandon, "Experimentation with Computer-Assisted Instruction in Technical Education," Pa. State Univ., OE5-85-074, OE proj. no. 5-0035 (in process, to be completed May 31, 1969)

1706. Ray, E., "Maximization of the Professional Potential of Home Economics Teachers Through Group Counseling," Pa. State Univ., OE 6-85-039, OE proj. no. 5-0194 (in process, to be completed August 31, 1967)

1707. Edgerton, H. A., "Statistical Predication of Training Program Success," Washington, D.C., Performance Research, Inc., OE 5-85-037, OE proj. no. 5-127 (completed October 31, 1965)

1708. Bemis, M., "Symposium in Occupational Education, Manpower, and Economic Change in the United States," Bloomington, Ind., Phi Delta Kappa, Inc., OE 6-85-066, OE proj. no. 5-0159 (in process, to be completed June 30, 1966)

1709. "A Study of the Need for Work Adjustment and Social Work Assistance for the Long-Term Unemployed," The City of Philadelphia, U.S. Dept. of Labor, OMAT (in process March 1965)

1710. Corrazzini, A. J., "Economic Effects of Vocational Education in Worcester, Massachusetts," Princeton, N. J., Princeton Univ., OE 6-85-055, OE proj. no. 5-0172 (in process, to be completed August 31, 1966)

1711. Arnold J. P., "A Study of Recommendations for Technical Education Curricula," Purdue Univ., OE 6-10-007, OE proj. no. 5-8266 (completed December 31, 1965)

1712. Bently, R. R., "Changing Teacher Morale," Lafayette, Ind., Purdue Univ., OE 6-85-064, OE proj. no. 5-0151 (in process, to be completed September 30, 1967)

1713. Wilson, P., "New Directions in Vocational Guidance, an Institute for Counselor Education," New York, Queens Coll., OE 6-85-001, OE proj. no. 5-0184 (completed November 30, 1965)

1714. Roam, J. E., "A Demonstration Training Program for Potential School Dropouts," Quincy, Ill., Quincy Public Schools, OE 5-85-053, OE proj. no. 5-0003 (in process, to be completed May 31, 1968)

1715. Gibbons, W. D., "A Longitudinal Study of Career Development," Weston, Mass., Regis Coll., OE 3-10-047, OE proj. no. 5-0088 (in process, to be completed September 14, 1966)

1716. Bertolaet, F., "Regional Conference on Education, Training and Employment," Chicago, The Research Council of the Great Cities Program for School Improvement, OE 5-85-006, proj. no. 5-0010 (completed April 30, 1966)

1717. McGregor, G. C., "Computer-Assisted Instruction Summer Training Program," Providence, R. I., R. I. State Dept. of Education and Providence Coll., OE 5-85-105, OE proj. no. 5-0014 (completed August 31, 1965)

1718. "A Proposed Long-Range Plan for Occupational and Vocational-Technical Education for Rhode Island," R. I. State Board of Education and Teachers Coll., Columbia Univ., Inst. of Field Studies, New York (completed March 1965)

1719. Fribance, A. E., "Industrial Instrumentation Technology for Instructors in Junior Colleges and Technical Institutes," Rochester, N. Y., Rochester Inst. of Technol., OE 6-85-011, proj. no. 5-0179 (completed August 31, 1965)

1720. "A Study of the Distinguishing Characteristics of Workers Eligible for Consideration for Training Programs and Their Success or Failure in the Selection and Training Process," New Brunswick, N. J., Rutgers Univ., U.S. Dept. of Labor, OMAT (in process March 1965)

1721. Blasingame, R., "Seminar To Study the Problems Affecting Library Service in Metropolitan Areas," New Brunswick, N.J., Rutgers Univ., OE 4-10-273, OE proj. no. 5-0076 (completed December 31, 1965)

1722. Larson, M. E., "A Two-Week Summer Institute in Advanced Instrumentation for In-Service Technical Instructors," New Brunswick, N.J., Rutgers Univ., OE 5-85-032, OE proj. no. 5-0062 (completed August 31, 1965)

1723. Larson, M. E., "Development of a Model for a Technological Center for Keeping Vocational-Technical Teachers Updated in Their Fields," New Brunswick, N.J., Rutgers Univ., OE 5-85-043, OE proj. no. 5-0018 (completed December 31, 1965)

1724. O'Brian, J. L., "The Advanced Degree and Vocational-Technical Education Leadership," (a symposium) New Brunswick, N.J., Rutgers Univ., OE 6-85-053 (completed December 31, 1965)

1725. O'Brian, J. L., "The Development of a Master Teacher Training Curriculum for Teachers of Occupational Level Training Programs," New Brunswick, N.J., Rutgers Univ., OE 6-85-047, OE proj. no. 5-0171 (in process, to be completed May 31, 1966)

1726. "McDaniel, J. W., "Project NOTIFY--Needed Occupational Television Instruction for Youth," San Bernardino, Calif., San Bernardino Valley Coll., OE 5-85-050, OE proj. no. 5-0068 (in process, to be completed May 31, 1966)

1727. Shirts, R. G., "Career Simulation for Sixth Grade Pupils," San Diego, Calif., San Diego Dept. of Education, Pupil Personnel Service, OE 6-85-013 (in process, to be completed June 30, 1966)

1728. McMurtrie, P., "Development and Evaluation of a One-Semester Stenography Course: Phase One of a Two-Phase Program," San Francisco State Coll., OE 5-10-326, OE proj. no. 5-8277 (in process, to be completed May 31, 1966)

1729. "The Educational and Vocational Rehabilitation of the Hard Core Unemployed," South Bend, Ind., South Bend Community School Corporation, U.S. Dept. of Labor, OMAT (in process March 1965)

1730. Fultz, A. C., "Workshop for the Preparation of Home Economics Teachers To Teach Wage-Earning Programs in Food Service," Carbondale, Ill., Southern Ill. Univ., OE 5-85-136, OE proj. no. 5-0015 (completed September 30, 1965)

1731. Gallington, R. O., "An Investigation of the Fate and Probable Future of High School Dropouts and Potential High School Dropouts in Alexander County, Illinois," Carbondale, Ill., Southern Ill. Univ., OE 5-85-005, OE proj. no. 5-0700 (completed December 31, 1965)

1732. Gallington, R. O., "Identification and Follow-Up of Special Students of District No. 5, Alexander County, Illinois," Carbondale, Ill., Southern Ill. Univ. (in process March 1966)

A study to determine if certain hypothetical remedial practices in vocational education retain potential high school dropouts.

1733. Gallington, R. O., "Evaluation and Report on Pilot Supervised Job Training Programs," Carbondale, Ill., Southern Ill. Univ. (in process March 1966)

A study to evaluate objectives and goals of the Job Training Centers at Robinson, Des Plaines, Park Ridge, and the Drake Vocational Guidance and Education Center, Chicago, and to make summaries, conclusions, and recommendations.

1734. "An Evaluation of the Concept of Trainee Camps for Unemployed Youth," Menlo Park, Calif., Stanford Research Inst., U.S. Dept. of Labor, OMAT (in process March 1965)

1735. "The Scope of Industrial Training in Selected Skilled and Technical Occupations," Menlo Park, Calif., Stanford Research Inst., U.S. Dept. of Labor, OMAT (in process March 1965)

1736. Kincaid, H. V., "Supply and Demand Factors Affecting Vocational Education Planning," Stanford, Calif., Stanford Research Inst., OE 5-85-068, OE proj. no. 5-0208 (completed March 31, 1966)

1737. Allen, D., "Flexibility for Vocational Education Through Computer Scheduling," Stanford, Calif., Stanford Univ., OE 5-85-071, OE proj. no. 5-0034 (in process, to be completed June 30, 1966)

1738. Krumboltz, J. D., "Vocational Problem-Solving Experiences for Stimulating Career Exploration and Interest," Stanford Univ., OE 5-85-059, OE proj. no. 5-0070 (in process, to be completed November 30, 1966)

1739. MacConnell, J. D., "Design for the Future: Spaces in Area Vocational Schools," Stanford, Calif., Stanford Univ., OE 6-85-038, OE proj. no. 5-1165 (completed February 28,1966)

1740. Parker, E. B., "Patterns of Information Seeking in Adult Education," Stanford, Calif., Stanford Univ., OE 4-10-193, OE proj. no. 5-0083 (in process, to be completed September 30, 1966)

1741. Stone, W., "Developmental Program in Animal Science," Delhi, N. Y., State Univ. of N. Y., OE 5-85-076, OE proj. no. 5-0071 (in process, to be completed November 30, 1969)

1742. Sullivan, C. E., "The Social Restoration of Young Offenders Through Vocational Education," New York, Staten Island Mental Health Soc., OE 5-85-015, OE proj. no. 5-0049 (in process, to be completed May 31, 1967)

1743. Face, W. L. and E. R. Flug, "Establishment of a Course of Study in American Industry as a Transitional Subject Between General and Vocational Education," Menomonie, Wis., Stout State Univ., OE 5-85-060, OE proj. no. 5-0058 (in process, to be completed June 30, 1970)

1744. "To Develop a Model for Projecting Employment by Industry and by Occupation for Counties, Labor Areas, or SMSA's Together with Appropriate Data,"Philadelphia, Temple Univ., U.S. Dept. of Labor, OMAT (in process March 1965)

1745. "Study of Slow Learners," Tenn. Dept. of Vocational-Technical Education and Bristol Tech. School, Bristol, Tenn. (in process March 1966)

1746. "Teaching Aids for Child Centers," Tenn. Dept. of Vocational-Technical Education and Hamilton H.S., Memphis, Tenn. (in process March 1966)

1747. "Study of Slow Learners," Tenn. Dept. of Vocational-Technical Education and Obion County Central H.S., Troy, Tenn. (in process March 1966)

1748. "Agriculture, Office and Distributive Education Programs," Tenn. Dept. of Vocational-Technical Education and Onieda H.S., Onieda, Tenn. (in process March 1966)

1749. "Pilot Program Matching Students with Occupations," Tenn. Dept. of Vocational-Technical Education and Polk County H.S., Benton, Tenn. (in process March 1966)

1750. "Agriculture and T & I Programs," Tenn. Dept. of Vocational-Technical Education and Portland H.S., Portland, Tenn. (in process March 1966)

1751. "Agriculture and Distributive Education Programs," Tenn. Dept. of Vocational-Technical Education and Sharon H.S., Sharon, Tenn. (in process March 1966)

1752. "Home Economics and Practical Nurse Project," Tenn. Dept. of Vocational-Technical Education and Technical H.S., Memphis, Tenn. (in process March 1966)

1753. "Follow-Up of High School Graduates--Chattanooga," Tenn. Dept. of Vocational-Technical Education and Univ. of Tenn., Knoxville, Tenn. (in process March 1966)

1754. "Six Office Occupation Programs," Tenn. Dept. of Vocational-Technical Education, Univ. of Tenn. and Local Boards (in process March 1966)

1755. Beardon, H. R., "Technical Training for Industrial Radiographers," Texas A&M Univ. College Station, OE 5-85-079, OE proj. no. 5-0042 (in process, to be completed July 31, 1966)

1756. Buntin, A., "Workshop for Administrators of Vocational Home Economics Training Programs in Wage-Earning Occupations," Lubbock, Tex., Texas Technol. Coll., OE 6-85-006, OE proj. no. 5-0180 (completed August 31, 1965)

1757. "Vocational and Occupational Guidance in the Sixties and Seventies," Tuskegee, Ala., Tuskegee Inst., U.S. Dept. of Labor, OMAT (in process March 1965)

1758. Roberts, R. W., "Contribution of Vocational Education to Actual Occupations of Former Homemaking Students," Univ. of Arkansas, OE 5-85-025, OE proj. no. 5-0002 (completed January 31, 1966)

1759. "Conference on Methods of Projecting Manpower Supply and Demand, Berkeley, Univ. of Calif., U.S. Dept. of Labor, OMAT (in process March 1965)

1760. Swanson, J. C., "Identification and Development of Instruments for a Study of State Vocational-Technical Education Agencies and Their Influence upon Local Programs," Berkeley, Univ. of Calif., OE 6-85-079 (completed January 15, 1966)

1761. "Evolving Jobs and Skills and Implications of Training and Education," Berkeley, Univ. of Calif., Inst. of Eng. Res. and Inst. of Industrial Relations, Human Factors in Technol. Res. Groups, U.S. Dept. of Labor, OMAT (in process March 1965)

1762. Allen, D., "A Study of the Aviation Mechanics Occupation," Los Angeles, Univ. of Calif., OE 6-85-043, OE proj. no. 5-0189 (in process, to be completed March 31, 1967)

1763. Popham, W. J., "Performance Tests of Instructor Competence for Trade and Technical Education," Los Angeles, Calif. Univ. of Calif., OE 5-85-051, OE proj. no. 5-004 (in process, to be completed September 30, 1967)

1764. "Methodology for Projection of Selected Occupational Trends in Denver Standard Metropolitan Statistical Area," Boulder, Univ. of Colo., U.S. Dept. of Labor, OMAT (in process March 1965)

1765. Swenson, J. H., "Scientific Secretary Training Program Development," Univ. of Colo., OE 6-85-073, OE proj. no. 5-0188 (in process, to be completed September 30, 1967)

1766. "An Innovation Organization and Administration Leadership Training Program for the Development of Vocational Education Oriented Administrators," Univ. of Georgia, Coll. of Education, U. of Ga. res. proj. no. 7 (in process March 1966)

1767. "A National Seminar on Research and Curriculum Development," Athens, Ga., Univ. of Ga., Coll. of Education, U. of Ga. res. proj. no. 3 (in process March 1966)

1768. Duncan, A. O., "The Development of a Teacher's Guide on Keeping and Analyzing Supervised Farming Records in Vocational Education in Agriculture," Univ. of Ga., OE 6-85-034, OE proj. no. 5-8397 (completed January 31, 1966)

1769. Holt, F. D., "Short-Term Training Program for Counselors," Univ. of Ga., OE 5-85-092, OE proj. no. 5-0875 (completed August 31, 1965)

1770. Ertel, K., "A Conference of Key Small School Administrators of the Northwest To Develop Vocational Education Programs for Small Isolated School Districts," Univ. of Idaho, OE 6-85-004, OE proj. no. 5-0143 (completed August 31, 1965)

1771. Loudermilk, K. M., "Establishment of a State Occupational Research and Development Coordinating Unit," Univ. of Idaho and Idaho State Board of Vocational Education, Moscow, Idaho, OE 5-85-118, OE proj. no. 5-0102 (in process, to be completed November 30, 1966)

1772. "Evaluation of Training and Recruitment Problems for Selected Technical Occupations in Short Supply," Champaign, Ill., Univ. of Ill., Inst. of Labor and Industrial Relations, U.S. Dept. of Labor, OMAT (in process March 1965)

1773. Dobrovolny, J. S., "An Eight-Week Summer Training Program To Upgrade Subject Matter Competency of High School Drafting Teachers in Advanced Graphics, Statics, and Applied Mathematics," Univ. of Ill., OE 5-85-024, OE proj. no. 5-0073 (completed December 31, 1965)

1774. Dobrovolny, J. S., "Curriculum Development in Engineering Technology," Univ. of Ill. (in process March 1966)

A continued study to develop, revise, and implement a two-year, six-quarter Engineering Technology program.

1775. Evans, R. N., "Seminars for the Training of Researchers in Vocational Education," Univ. of Ill., OE 5-85-002, OE proj. no. 5-0199 (completed August 31, 1965)

1776. Krebs, A. H., "Development of World of Work Instructional Programs," Univ. of Ill. (in process March 1966)

A study of occupational knowledge of youth, the effect of occupational instruction programs, and an evaluation of a pilot instructional center.

1777. Murphy, C., "Engineering Technician Need Study--Lake County," Univ. of Ill. (in process March 1966)

A continued study of technician needs, basic economic factors, and educational implications in Lake County, Ill.

1778. Phipps, L. J., "Evaluation of Pilot Programs in Agricultural Education," Univ. of Ill. (in process March 1966)

Continued research and evaluation of pilot programs to determine objective and subjective results and make recommendations to other schools.

1779. Phipps, L. J., "Improved Opportunities for Disadvantaged Youth Through Vocationally Oriented Education," Univ. of Ill., OE 5-85-041, OE proj. no. 5-0125 (in process, to be completed May 31, 1970)

1780. Simpson, E., "The Classification of Education Objectives, Psychomotor Domain," Univ. of Ill., OE 5-85-104, OE proj. no. 5-0090 (in process, to be completed May 31, 1966)

1781. Tomlinson, R. M., "A Long-Range Study of Practical Nursing," Univ. of Ill., OE 5-85-038, OE proj. no. 5-0126 (in process, to be completed August 31, 1968)

1782. Whitmarsh, R. E. and E. Simpson, "An Exploratory Study To Identify the Knowledges in Child Development and Guidance Needed by Mothers and by Workers in Occupations Related to Child Care," Univ. of Ill., OE 6-85-082 (in process, to be completed August 31, 1966)

1783. Crites, J. O., "Vocational Development and Vocational Education in Adolescence," Iowa City, Ia., Univ. of Iowa, OE 5-85-018, OE proj. no. 5-0038 (in process, to be completed April 31, 1968)

1784. Binkley, H., "Demonstration Center at Reidland High School for Training Youth in Nonfarm Agricultural Occupations," Univ. of Ky., OE 6-85-019, OE proj. no. 5-0131 (in process, to be completed December 31, 1967)

1785. Lamar, C. R., "Structuring a Program of Research and Development for Kentucky Designed To Bring Together All Available Research Resources To Support a Continuing Program of Vocational Education," Univ. of Ky., OE 5-85-113, OE proj. no. 5-0133 (in process, to be completed November 30, 1966)

1786. Maley, D., "Identification of Occupational Clusters and Development of Outlines for High School Training Courses," Univ. of Md., OE 6-85-023, OE proj. no. 5-0183 (in process, to be completed August 31, 1966)

1787. Duncan, O. D., "Socioeconomic Background and Occupational Achievement: Extension of a Basic Model," Ann Arbor, Mich., Univ. of Mich., OE 5-85-072, OE proj. no. 5-0074 (in process, to be completed November 30, 1967)

1788. Epps, E. G., "Family and Achievement: A Proposal To Study the Effect of Family Socialization on Achievement Orientation and Performance Among Urban Negro Americans," Ann Arbor, Mich., Univ. of Mich., OE 6-85-017, OE proj. no. 5-1006 (in process, to be completed May 31, 1968)

1789. French, J. R., "The Re-Education of the Culturally Deprived Dropout," Ann Arbor, Mich., Univ. of Mich., OE 5-10-243, OE proj. no. 5-0075 (completed February 28, 1966)

1790. Harris, N. C. and W. R. Yencso, "Technical Education in Michigan Community Colleges," ORA 06321, Ann Arbor, Mich., Univ. of Mich., School of Education (completed March 1965)

This was a study of the feasibility of pre-technical programs in high schools. They ascertained from high school and community college personnel in Michigan information about technician curriculum offerings and guidance procedures.

1791. Hunter, W. W., "An Experimental Research Demonstration Project in Pre-Retirement Education for Hourly-Rated Workers," Ann Arbor, Mich., Univ. of Mich., OE 2-10-047, OE proj. no. 5-0024 (completed December 31, 1963)

1792. Kahn, R., "Study of Youth in High School at Work and Unemployed," Ann Arbor, Mich., Univ. of Mich., OE 5-85-054, OE proj. no. 5-0196 (in process, to be completed May 31, 1971)

1793. "Katz, D., "The Effectiveness of Experimental Conferences," Ann Arbor, Mich., Univ. of Mich., OE 6-85-084, OE proj. no. 5-1158 (in process, to be completed May 31, 1967)

1794. Lanham, F. W., "A Pilot Project in Programmed Learning To Extend the Purposes and Increase Factors of Motivation," Ann Arbor, Mich., Univ. of Mich. (completed October 1963)

This was an experiment to adapt and to extend the purposes of the tool of programmed instruction for students in cooperative business occupational programs to (1) search for "hidden persuaders" to increase the desire to learn, (2) to include in the purposes of programmed instruction techniques of learning that would be transferable to other similar learning situations.

1795. Smith, R., "A Study of Work Orientations of Teenagers," Ann Arbor, Mich., Univ. of Mich., OE 5-85-067, OE proj. no. 5-1008 (in process, to be completed September 30, 1966)

1796. Wenrich, R. C., "An Experimental Program for the Development of Persons for Leadership Roles in the Administration and Supervision of Vocational-Technical Education," Univ. of Mich. (completed Summer 1965)

1797. Wenrich, R. C., and R. J. Crowley, "Vocational Education as Perceived by Different Segments of the Population," Ann Arbor, Mich., Univ. of Mich., Cooperative res. proj. no. 1577, 1964

This project described by means of a measuring instrument perceptions of individuals in contact with a vocational education program. The scales used were a Likert-type summated-rating scale and a semantic differential scale.

1798. Wenrich, R. C. and E. W. Shaffer, "High School Principals' Perception of the Roles and Responsibilities of Persons Who Would Be Charged with the Responsibility for Leadership in the Development of Occupationally Oriented Programs in High Schools," Ann Arbor, Mich., Univ. of Mich., ORA 06845, September 1965

1799. Hendrix, V. L., "Environmental Influence on Occupational Programs of Public Junior Colleges," Univ. of Minn., OE 6-85-020, OE proj. no. 5-0120 (in process, to be completed August 31, 1969)

1800. Moss, Jr., J., "The Influence of Industrial Arts Experience on Grades Earned in Post-High School Trade and Industrial Curriculums," Univ. of Minn., OE 4-10-016, OE proj. no. 5-0012 (completed November 30, 1965)

1801. Moss, Jr., J., "Minnesota Coordination Unit for Research and Development in Occupational Education," Univ. of Minn., OE 5-85-120, OE proj. no. 5-0097 (in process, to be completed November 30, 1966)

1802. Peterson, M. J., "Educational Restrictions to Agricultural Success and the Relationship of Education to Income Among Farmers," Univ. of Minn., OE 4-10-248, OE proj. no. 5-0082 (in process, to be completed June 30, 1966)

1803. "Bibliography of Studies Relevant to Occupational Education," Univ. of Minn., Dept. of Industrial Education, Res. Coordination Unit in Occupational Education

"Occupational education" is defined as training or retraining which is designed to prepare individuals for gainful employment in occupations generally requiring less than a baccalaureate degree. Services such as vocational guidance and counseling, and related instruction necessary to benefit from such training are also included in the bibliography.

1804. "An Annotated Bibliography of Research Related to Unemployment and Retraining," Univ. of Minn., Laboratory for Res. in Social Relations, U.S. Dept. of Labor, OMAT (in process March 1965)

1805. Heding, H., "Missouri Adult Vocational-Literacy Materials Development, Teacher Training and Demonstration Project," Columbia, Mo., Univ. of Mo., OE 5-85-027, OE proj. no. 5-0094 (in process, to be completed May 30, 1966)

1806. Sjogren, D. D., "The Influence of Speed and Prior Knowledge and Experience on Adult Learning," Lincoln, Neb., Univ. of Neb., OE 4-10-068, OE proj. no. 5-0011 (completed October 19, 1965)

1807. Woollatt, L., "A Developmental Project for Interstate Research, Demonstration, Training, and Pilot Programs in Vocational-Technical Education," Univ. of the State of New York, N. Y. State Dept. of Education and Conn. State Dept. of Education, OE 5-85-110, OE proj. no. 5-0043 (in process, to be completed November 30, 1966)

1808. "A Manpower Study of Clinical Laboratory Personnel," Chapel Hill, N. Car., Univ. of N. Car., Dept. of Hospital Administration, U.S. Dept. of Labor, OMAT (in process March 1965)

1809. Alm, K., "Establishing a Vocational Research Coordinating Unit," Grand Forks, N. Dak., Univ. of N. Dak., OE 5-85-114, OE proj. no. 5-0134 (in process, to be completed November 30, 1966)

1810. "Area Skills and Vocational Training Needs Surveys," Grand Forks, N. Dak., Univ. of N. Dak. Res. Coordinating Unit (in process March 1966)

Necessary steps have been taken to conduct a preliminary area skills and vocational training needs survey for eight counties in southwestern North Dakota. Variables such as present and future employee needs of business and industry and their implications for vocational education programs are being explored.

1811. "The High School Dropout in North Dakota," Grand Forks, N. Dak., Univ. of N. Dak., Res. Coordinating Unit (in process March 1966)

The purpose of this study is to better understand the dropouts from small high schools in a rural environment, to develop a model useful to school personnel for identifying potential dropouts, and to investigate the efficacy of a personal approach for disseminating vocational and educational information as a procedure to reduce the dropout rate.

1812. "Summer Institute for Vocational Education," Grand Forks, N. Dak., Univ. of N. Dak. Res. Coordinating Unit (proposed)

This proposal requests funds to establish a summer institute for training vocational educators. The aim of such an institute will be to develop greater competency in the teaching of vocational education, and to provide basic background information related to the teaching of vocational subjects. Further, the institute will attempt to develop a proposed curriculum for a vocational teacher training program for rural states.

1813. "A Study of Academic and Non-Academic Variables for Predicting Achievement in Technology Courses," Grand Forks, N. Dak., Univ. of N. Dak. Res. Coordinating Unit (proposed)

1814. "A Study of Vocational Educational Needs of North Dakota Youth Who Do Not Continue with Further Formal Education Beyond High School," Grand Forks, N.Dak., Univ. of N. Dak. Res. Coordinating Unit (proposed)

1815. Warren, M.A., "Conference To Identify Concepts Important to Youth Orientation to the World of Work," Univ. of Okla., OE 5-85-101, OE proj. no. 5-0056 (completed October 31, 1965)

1816. Ellis, R. A., "Planned and Unplanned Aspects of Occupational Choices by Youth," Eugene, Ore., Univ. of Ore., OE 5-85-026, OE proj. no. 5-0052 (in process, to be completed August 31, 1966)

1817. Mitchell, H.E., "Counselor Institute and Follow-Up Workshop Project," Philadelphia, Pa., Univ. of Pa., OE 6-85-008, OE proj. no. 5-0112 (in process, to be completed June 30, 1966)

1818. Martin, A., "A Multi-Media Approach to Communicating Occupational Information to Non-College Youth," Pittsburgh, Pa., Univ. of Pittsburgh, OE 6-85-052, OE proj. no. 5-0162 (in process, to be completed November 30, 1967)

1819. Sweeney, T. J., "A Developmental Program for Vocational Counselors Directed Toward Serving Disadvantaged Youth More Effectively," Columbia, S. Car., Univ. of S. Car., OE 5-85-091, OE proj. no. 5-0124 (completed February 28, 1966)

1820. Prediger, D. J., "Validation of Counseling-Selection Data and Evaluation of Supplementary Programs for Vocational School Students," Univ. of Toledo Res. Foundation (in process, to be completed December 31, 1969)

The general objectives of the research project are (1) to identify the psychological dimensions differentiating students successfully completing training in each of more than 20 diverse, high school level vocational programs; (2) to develop an automated package for the collection, validation-analysis, summary, and distribution of objective and useful vocational counseling and selection data; and (3) to evaluate the effectiveness of various supplementary programs designed to help vocational school students with below average scholastic aptitude complete their high school education and obtain the maximum benefit from it.

1821. Richardson, R. C., "Impediments to Labor Mobility," Salt Lake City, Univ. of Utah, U. S. Dept. of Labor, OMAT (in process March 1965)

1822. "A Study of the Apprenticeship System in the State of Wisconsin," Madison, Univ. of Wisconsin, U. S. Dept. of Labor, OMAT (in process March 1965)

1823. Grinder, R. E., "Influences of the Father's Job and Social Status on the Occupational and Social Goals of Youth," Madison, Univ. of Wis., OE 5-85-061, OE proj. no. 5-0121 (in process, to be completed August 31, 1967)

1824. Little, J. K., "Conference on Occupational Data Requirements for Education," Madison, Univ. of Wis., OE 5-85-090, OE proj. no. 5-0066 (completed February 28, 1966)

1825. Samson, H. E., "An Experimental Vocational Education Institute for the Preparation of Teacher Coordinators of Newly Emerging High School Vocational Programs," Univ. of Wis., OE 5-85-007, OE proj. no. 5-0092 (in process, to be completed June 30, 1966)

1826. "Training Implications of Job Shifts from Blue-Collar to White-Collar Employment," Madison, Regents of the Univ. of Wis., U.S. Dept. of Labor, OMAT (in process March 1965)

1827. "Tabulations on the Labor Reserve," U.S. Dept. of Commerce, Bur. of Census for OMAT (in process March 1965)

1828. "Employment of Scientific and Technical Personnel in Industry," U.S. Dept. of Labor, Bur. of Employment Security, Div. of Occupational Employment Statistics (in process March 1965)

1829. "Office of Manpower Analysis and Utilization," U.S. Dept. of Labor, Bur. of Employment Security, Employment Service (in process March 1965)

1830. "Changing Employment Patterns and Outlook in Retail Trade," U.S. Dept. of Labor, Bur. of Labor Statistics, Div. of Manpower and Occupational Outlook (in process March 1965)

1831. "Employment of Technicians, 1963-1975," U.S. Dept. of Labor, Bur. of Labor Statistics, Div. of Manpower and Occupational Outlook (in process March 1965)

1832. "Impact of Technological Changes on Employment and Occupational Patterns of Newspaper Production Workers," U.S. Dept. of Labor, Bur. of Labor Statistics, Div. of Manpower and Occupational Outlook (in process March 1965)

1833. "Employment of Scientific and Technical Personnel in Local Governments," U.S. Dept. of Labor, Bur. of Labor Statistics, Div. of Occupational Employment Statistics (in process March 1965)

1834. "Employment of Scientific and Technical Personnel in State Governments," U.S. Dept. of Labor, Bur. of Labor Statistics, Div. of Occupational Employment Statistics (in process March 1965)

1835. "Occupational Industry Matrix Projects," U.S. Dept. of Labor, Div. of Occupational Employment Statistics, Bur. of Labor Statistics for OMAT (in process March 1965)

1836. "An Annotated Bibliography of Studies of Occupations from the Field of Occupational Sociology," Cleveland, Vocational Guidance and Rehabilitation Services, U.S. Dept. of Labor, OMAT (in process March 1965)

1837. "Changes in Women's Occupations, 1950-1960," U.S. Dept. of Labor, Women's Bur. (in process March 1965)

1838. "Conference with School Guidance Counselors," U.S. Dept. of Labor, Women's Bur., OMAT (in process March 1965)

1839. "Mid-West Regional Conference on Vocational Counseling for Girls," U.S. Dept. of Labor, Women's Bur., supported by OMAT (in process March 1965)

1840. "Women Workers--Their Special Training Needs," U.S. Dept. of Labor, Women's Bur., supported by OMAT (in process March 1965)

1841. Nichols, M., "A State Coordinating Unit for Research and Curriculum Development in Vocational and Technical Education," Salt Lake City, Utah State Dept. of Public Instruction, OE 5-85-133, OE proj. no. 5-0135 (in process, to be completed November 30, 1966)

1842. Crawford, L., "A Competency Pattern Approach to Curriculum Construction in Distributive Teacher Education," Blacksburg, Va., Va. Polytechnic Inst., OE 6-85-044, OE proj. no. 5-0166 (in process, to be completed December 30, 1967)

1843. "Preparatory Programs in Distributive Education," Richmond, Va. State Board of Education and Richmond Professional Inst., OE 599083 (in process March 1966)

1844. "A Competency Pattern Approach to Curriculum Construction in Distributive Teacher Education," Va. State Board of Education and Va. Polytechnic Inst. (in process March.1966)

1845. "Teacher's Manual," Va. State Board of Education and Va. Polytechnic Inst., OE 599153 (in process March 1966)

1846. Jeffery, C. R., "Preparation of the Disadvantaged for Vocational Training," Washington, D.C., Washington School of Psychiatry, OE 6-85-355, OE proj. no. 5-0145 (in process, to be completed August 31, 1967)

1854. Bailey, J. K., "Leadership and Professional Development of County Supervisors of Vocational Education in West Virginia," W. Va. State Board of Education, Bur. of Vocational, Technical and Adult Education (completed April 15, 1966)

Three five-day training sessions were held for county supervisors of vocational education. The content of these sessions was as follows: Session 1, program foundation and related legislation; Session 2, program structure; Session 3, program development, administration, and supervision.

1855. Townsend, J. J., "A Demonstration of the Cluster Approach in Preparing Youth with Diverse Capability for Employment in Electrical-Electronic Fields," W. Va. State Board of Education, Bur. of Vocational, Technical and Adult Education (proposed, to be completed August 31, 1969)

The project is a demonstrational presentation of a cluster approach to providing vocational education in electrical-electronic fields to youth possessing divergent capability. Eighty youth will be selected into the program principally on the basis of expressed interest in the electrical-electronics fields and the successful completion of the tenth grade. The program will feature occupational preparation, beginning with basic theory and related material, and proceeding to more advanced theory and application until each student has achieved his full potential, and prepared for occupational placement. There will be four distinct levels of occupational placement: commercial electricity, industrial electricity, radio-TV repair, and electronics.

1856. Dannenberg, R. A., "The Value of Programmed Instruction as a Tool for the Enhancement of High School Cooperative Education Students' Career Objectives," Western Mich. Unv. (proposed February 2, 1965)

1857. Mallinson, G., "Characteristics of Non-College Vocationally Oriented School Leavers and Graduates," Western Mich. Univ., OE 6-85-071, OE proj. no. 5-0142 (in process, to be completed June 30, 1967)

1858. Breese, W. D., "An Eight-Week Summer Institute Training Program To Retrain Office Education Teachers for Teaching Business Electronic Data Processing," Milwaukee, Wis. Inst. of Technol., OE 5-85-097, OE proj. no. 5-0040 (completed August 31, 1965)

1859. Safar, D., "Effects of a Summer Counseling Program with Potential Dropouts," Cheyenne, The State of Wyoming, OE proj. no. 5-8136-2-12-1 (completed March 1966)

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